

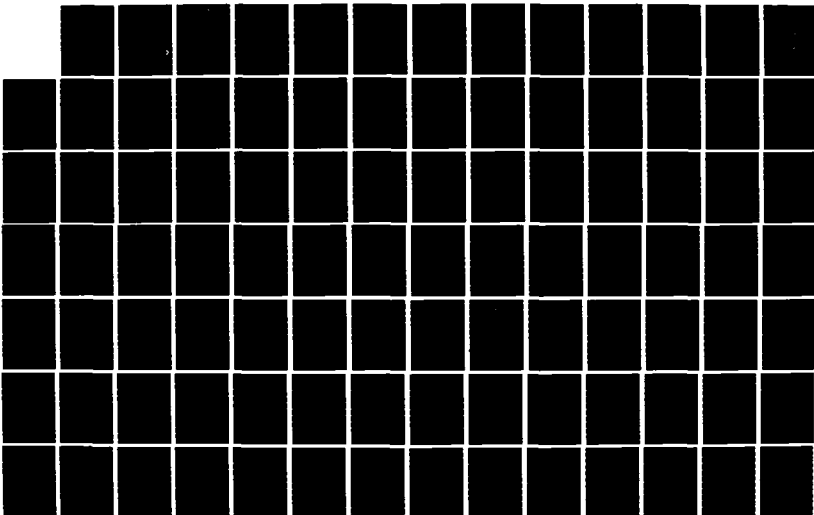
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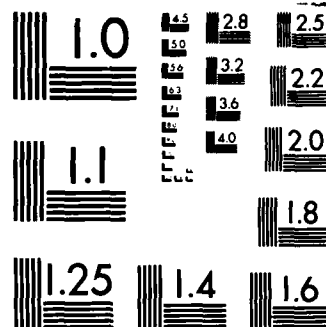
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ARCHEOLOGICAL MONITORING PLAN FOR
FOUR FLOODWALL PROJECTS IN THE CITY OF NEW ORLEANS

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MAY 29, 1985

FINAL REPORT

PREPARED FOR:

DEPARTMENT OF THE ARMY
U. S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
P. O. Box 60267
NEW ORLEANS, LOUISIANA 70160

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) <p>This report presents a research design and data recovery plan for the historic archeological treatment of properties located within a series of four planned floodwall alignments on the left descending bank of the Mississippi River in the City of New Orleans, pursuant to Contract No. DACW29-84-D-0029. Within the four floodwall alignments, thirteen of a total of forty-two city blocks, and two additional locations in the upriver alignment (Jackson-Thalia), may contain varied cultural resources eligible for the National Register of Historic Places. Of the thirteen blocks recommended for monitoring, twelve are located in the</p>																							

downriver floodwall alignments (Barracks-IHNC). Because of the narrow linear configuration of the direct impact zones, monitoring and archeological recordation during construction has the potential to provide important information on the history of the riverfront while at the same time only minimally affecting the buried cultural resources of the area. Monitoring provides an opportunity to identify historic resources that are preserved in place landward of the floodwall.

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CHAPTER I

INTRODUCTION

This report, undertaken pursuant to Contract No. DACW 29-84-D-0029, presents a research design and data recovery plan for the historic archeological treatment of properties located within a series of four planned floodwall segments in the New Orleans District, U.S. Army Corps of Engineers. The study area is located along the left descending bank of the Mississippi River in the City of New Orleans. It forms a linear corridor that follows the track of the New Orleans Public Belt Railroad (NOPBR) system. Based on archival and historic map research, it is predicted that potentially significant historic archeological remains will be impacted by the planned floodwall construction.

The proposed floodwall alignment extends along the riverfront of portions of New Orleans for a total of 3.11 miles (5.02 kilometers). The areas of impact are divided into four distinct alignments. One is upriver from the Vieux Carre; three are downriver. The upriver segment extends from Jackson Avenue to Thalia Street (Figure 1). The three downriver alignments are adjacent, forming a continuous line from Governor Nicholls Street to the Inner Harbor Navigation Canal (IHNC), as shown in Figure 2.

The first stage of the research effort described herein involved the inventory and classification of all documented historic properties located in the floodwall right-of-ways (Chapter III). A previous project report undertaken for the New Orleans District, U.S. Army Corps of Engineers, by William D. and Sally K. Reeves (1983), and entitled Archival Evaluation of Floodwall Alignments, New Orleans, Louisiana (Contract No. DACW29-82-M-1980), provided primary written source material on historic land use (Chapter II), as directed in the scope of work for this project. Sanborn Insurance Maps (1876, 1895, 1896) and Braun maps (1877) also were used to provide locational data on former standing structures dating from the last quarter of the nineteenth century. Data from these sources then were applied in the construction of a typology of historic structures in the four floodwall corridors.

The subsequent stage of research consisted of the development of an explicit set of significance criteria for the various classes of buried cultural resources that may be impacted by the planned floodwall construction (Chapter IV). Criteria deduced from this thematic review of the classificatory treatment of historic properties then were applied in evaluatory assessment of individual properties that may contain potentially significant historic archeological data. Finally, an archeological monitoring plan was designed for the four floodwall segments. Pursuant to the scope of work for this project, the monitoring plan developed herein has been designed to proceed concurrently with the planned floodwall construction effort.

the upriver faubourgs were connected by significant internal routes of transportation. The downriver segments contained no effective internal transportation system until 1859. This was due primarily to the Macarty plantation, which remained undivided until 1859. Several other parcels also remained undeveloped. Thus, early economic power became concentrated in the upriver faubourgs, stimulated by the American presence, by transportation networks, and by the growth of the batture, which became prime land for economic development.

The issue of ownership and use of batture land formed by river deposition was closely tied to the subdivision and land use of the former plantation lands during the early nineteenth century. However, new batture formed upriver from and in front of the Vieux Carre during the eighteenth and nineteenth centuries. As new batture formed along the river, property owners sought to extend their property claims to the riverfront and to develop the land. The city, on the other hand, labelled the batture public property. These divergent views resulted in numerous legal battles that continued throughout much of the nineteenth century. When Faubourgs Annunciation and LaCourse initially were subdivided, the fronting batture was reserved for public use. However, batture growth continued, and vacant land hindered commercial development and rendered steamboat landings impossible. By 1836, the batture had grown in the uptown American sector so extensively that the wharves needed to be extended in order to reach the river. The Supreme Court ruled in 1838 that the American Sector (Municipality No. 2) had the right to extend wharves, provided that some areas on the batture were reserved for citizens to dig fill. In the 1850s, the heirs of the former owners of land in the Faubourgs Annunciation and LaCourse petitioned the State Legislature for permission to repossess the land in a settlement with the city. This was granted in 1855, in the form of an act that permitted residents of incorporated towns to claim batture no longer needed by the public. The city protested this act, and the dispute continued until 1868. In that year, the parties reached a settlement whereby the land was surveyed and sold and the proceeds were divided among them. The Race to Thalia Streets floodwall segment, then, formed part of the post-1830 batture lands. It was occupied by wharves until mid-century. After 1868, portions of this area were utilized as coalyards. This reflected the increasing importance of coal as a fuel. The area remained largely vacant until ca. 1880, when it was acquired by the Texas and Pacific Railroad. Freight depots and railroad-related structures subsequently were erected there.

An important aspect of the growth and development of the port of New Orleans was the construction of an extensive system of wharves and docks along the river. During the early nineteenth century, the levees were strengthened to facilitate commerce. In 1810, the first revetment was constructed along a portion of the levee in front of the Vieux Carre. Local engineering for levee revetment showed increasing sophistication between 1812 and 1820. As a result, it was recognized that docks could be extended well

In 1807, Jacques Livaudais and Robin de Logny retained Barthelemy Lafon to draw the plan for subdividing their plantation, which was located upriver from Faubourg Saulet. Lafon reworked the plan of Faubourgs Delord and Saulet to provide a common pattern of streets. This subdivision became known as Faubourgs Annunciation and LaCourse. The batture in front of Faubourg Annunciation quickly became a haven for flatboats, and later, for steamboats. This area included the land located between Felicity and Market Streets. The batture located between St. James and Race Streets remained in disputed ownership from 1807 to 1867. As a result, the batture in this area remained open land for much of the nineteenth century.

In 1810, the Ursuline Nuns sold their small plantation upriver from Faubourg Annunciation, probably to raise money for the purchase of a new plantation downriver. Joseph De Ville Desgoutin Bellechasse purchased most of the tract, and he retained Barthelemy Lafon to survey the land for subdivision. This became the Faubourg Nuns. Three years later, in 1813, Marguerite Wiltz, the widow of Joseph Milhet and Jacinto Panis, subdivided her ten arpent tract located upriver from Faubourg Nuns. She hired F.V. Potier to implement a plan of subdivision for the area. The principle street in Faubourg Panis was Cours Panis, later renamed Jackson Street and Jackson Avenue.

The subdivision of the properties located downriver from the Vieux Carre occurred at a slower rate and at later dates than those upriver. Faubourg Marigny was the only downriver suburb laid out by 1813. Plans for Faubourg Marigny were designed in 1806, on the estate of Bernard Marigny. Marigny's plantation extended from Elysian Fields to Franklin Avenue. Marigny was Jacques Francois Livaudais' brother-in-law, and heir to a large fortune. While still a minor, Marigny decided to subdivide his property. He hired Nicolas de Finiel to draw a plan of subdivision of the lands that his father, Pierre Marigny, had purchased. Marigny then retained Barthelemy Lafon to implement Finiel's plans. Lafon completed the project in 1813. Marigny donated the batture between Barracks and Enghien (now Franklin) Streets to the public, clearing the way for many later public uses. Marigny reputedly refused propositions by American businessmen to develop his lands commercially, preferring a residential community (Wilson 1984:9). The lots were settled primarily by French Creoles, and later by German and Irish immigrants. The faubourg prospered as a residential area.

To summarize, both the upriver and downriver areas included in the proposed floodwall project segments initially comprised plantations. The subdivision of plantation lands as a response to population pressures and to increasing economic opportunities proceeded at an earlier date and at a faster rate upriver. As American businessmen focused their commerce and industry in the upriver faubourgs, a mixture of residential and commercial establishments were built along the riverfront. Additionally,

already had made a fortune and was one of New Orleans' leading citizens. One reason for this was his early recognition of the potential of steam navigation. In 1817, Touro and eleven partners purchased a steamship. In addition, Touro also invested heavily in real estate. Throughout his life, he was locally prominent in commercial and real estate ventures.

Known for "his many acts of kindness and for his interest in all public and philanthropic movements" (Huhner 1946:44), Touro developed an early reputation for charitable work. At his death in 1854, he bequeathed large sums to charities. His largest donation was \$80,000.00 for the founding of an alms house for the poor of New Orleans. In conjunction with Touro's gift, his friend R.D. Shepherd donated a double square of land for the construction of the Touro Alms House. The property was located between Piety and Desire Streets, fronting the river. The main building was designed to be a three story brick structure 270 feet (82.4 meters) in length, with a central portion fifty-two feet and six inches (16.0 meters) wide, and with two wings each ninety-two feet (28.1 meters) wide. The rear building was two stories tall, it was made of brick, and it measured 100 feet (30.5 meters) long by thirty feet (9.2 meters) wide. This Alms House complex was intended to accomodate between 400 to 500 people. Due to delays in construction, the complex was not completed prior to the War Between the States. Federal troops occupied the Alms House after capturing New Orleans in 1862. While under Federal control, a fire destroyed the complex.

Most of the American migrants to New Orleans settled upriver from the Vieux Carre, largely in the area that formerly comprised Bertrand Gravier's holdings. Gravier had begun selling riverfront lots as early as 1788. This land became New Orleans' first suburb, the Faubourg Ste. Marie. It was part of the American sector of the city. The Creole population settled largely in the Vieux Carre, and later on the downriver side of the city.

The plantation properties in the Jackson to Thalia floodwall alignment segment were subdivided earlier than those in downriver project segments. The faubourgs contained in the upriver segment included Faubourg Sarpy at the downriver terminus of the floodwall, Faubourgs Saulet, LaCourse, Nuns, and a portion of Faubourg Panis, which contains the floodwall's upriver limit. Throughout the first decade of the nineteenth century, the subdivision of plantations generally proceeded in an upriver direction.

Marguerite Foucher, the widow of Sylvestre Delord Sarpy, owned seven arpents just above the already established Faubourg Ste. Marie. In 1806, surveyor Barthelemy Lafon completed a plan for the lands that comprised Faubourgs Delord and Sarpy. Prior to sale, the owners built a new levee one square riverward of the old levee. This formed the line of New Levee Street. This street later was extended into Faubourg Ste. Marie and the upriver faubourgs.

side of Barracks Street to the lower side of the Marigny Canal was allocated for steamship use. However, less than a year later the space for steamships again had to be increased (Winston 1924:202). The initial subdivision of surrounding plantation lands into residential districts took place during this period. The riverfront continued to be the focus of commercial activity. Docks were constructed from the present day location of Louisiana Avenue to Poland Avenue. This area constituted the historic Port of New Orleans.

The subdivision of plantation properties along the Mississippi River began in earnest during the first decade of the American Period of New Orleans history. The initial impetus to subdivide was a swelling population and the economic opportunities presented by such an increase. Two major groups were responsible for the dramatic population rise, although immigrants representing varied origins also came to New Orleans during this period. The major groups that influenced the demographic composition of the population were immigrants from St. Domingue (Haiti) and American merchants.

After 1803, an influx of thousands of refugees from St. Domingue after Napoleon's unsuccessful attempt to regain possession of the island added considerably to the city's French Creole population. Between 1805 and 1810, the population in New Orleans grew from 12,000 to 24,500, primarily as a result of the St. Domingans. The French Creole landowners above and below New Orleans welcomed these immigrants and the opportunity to sell them land. The refugees entered the community at all economic and class levels.

Another stimulus for plantation subdivision was the migration of large numbers of American merchants and entrepreneurs in the city after 1803. The newly acquired American city was attractive to many Northern merchants who recognized the commercial potential of New Orleans. Migration to New Orleans from the large northeastern cities also stimulated commerce between the regions. Representatives of northern merchant houses brought a wide range of American goods to New Orleans on consignment. Many of these migrants acquired great wealth through their commercial enterprises and through land speculation.

One of the most notable Americans to migrate to New Orleans during this period was Judah Touro. Touro was among the most prominent philanthropists in America prior to the War Between the States. He was born in 1775 to immigrant Jews living in New England. Orphaned by age twelve, he was raised by his uncle Moses Michael Hayes, a prominent Boston merchant. Touro, who learned the mercantile trade from his uncle, moved to New Orleans in 1802. At that time, American cities were capturing commercial relations with New Orleans from the European cities. Touro was in an excellent position to profit from the growth in commerce between the Northeast and New Orleans. His first venture in the city was a shop which sold goods on consignment from Boston. By 1812, Touro

utilized as "commons" during portions of the eighteenth century. Following the French concept of town design, these commons were intended as vacant areas that could be fortified for the protection of the city. Thus, initial land grants during the 1720s did not include the areas reserved for commons. Fortifications were established in the commons after 1760; these generally were not maintained beyond the early 1790s (Reeves and Reeves 1983:33). At the end of the eighteenth century, Spanish patents ceded most of the land that had comprised the commons to a number of prominent individuals.

Governor Bienville, who owned land extending above New Orleans to the Chapitoulas Coast, granted a portion of his land to the Society of Jesus (Jesuits). By 1740, the Jesuits owned thirty-two arpents of land immediately above the city of New Orleans. Other prominent and early owners of upriver properties located within the Jackson to Thalia Floodwall alignment area included M. Lebreton and Renault D'Hautrive. During the second half of the eighteenth century, riverfront lands changed hands frequently. These properties also underwent a limited amount of subdivision. By 1790, seven land owners held the properties initially claimed by three (Reeves and Reeves 1983: Figure 7).

The land located immediately downriver from both the city and the commons was claimed by Claude Joseph Dubreuil (Wilson 1984:3). Dubreuil's plantation, established in 1743, was the largest agricultural landholding situated below New Orleans. Downriver from this property was the concession of Jonathan Darby; the Coustillas concession was the downriver neighbor of Darby. The downriver plantations followed the developmental sequence of those upriver, with increasing subdivision of the properties throughout the eighteenth century. However, land use in both areas remained predominantly agricultural.

The American Period, 1803 - 1860

The singular event of the Louisiana Purchase in 1803 insured the rise of New Orleans as the major port of the Mississippi Valley. Thereafter, New Orleans became the primary distribution center for the region between the Appalachians and the Rocky Mountains. This status continued throughout the period when water transportation was the primary mode of bulk shipment (Taylor 1976:62). In fact, the period between 1803 and 1860 may be characterized as the takeoff stage in the economy of New Orleans. This period of growth and development witnessed an influx of immigrants and of American merchants, as well as the construction of a large number of wharves and warehouses. Of equal importance to the growth of New Orleans as a major port was the development of steam-powered water vessels. The steamship was a major contributing factor in the acceleration of commerce on the river and at the port of New Orleans. By 1820, the number of steamships arriving at New Orleans had increased so rapidly that they required additional space for unloading their cargoes. In the downriver project area, the area from the upper

riverfront landscape. The railroads stimulated and expanded commerce during this period, much as the steamboats had done earlier in the century. Although the technological advancements that introduced rail shipment to the nation temporarily diminished the relative importance of riverine commerce, the Mississippi River remained a significant transportation artery.

The Eighteenth Century

New Orleans was founded in 1718, and in 1721 the city had four hundred inhabitants. The city maintained its original boundaries until the end of the eighteenth century. By the turn of the nineteenth century, the population of New Orleans had reached about 8,000, and the city began to acquire its first suburbs. Throughout this period, the focus of economic activity and commerce in New Orleans was the Mississippi River, the nation's largest river and primary inland waterway (Taylor 1976:41).

Nevertheless, the city's economic and demographic rates of growth were not especially rapid during the eighteenth century. Its strategic location was not fully exploited by the governing European countries during the colonial period. Rather, the city fulfilled primarily a governmental function, and neither France nor Spain effectively encouraged large scale migration to their North American holdings. Commercial and population growth during this period occurred primarily as a result of American settlement in the Ohio Valley. These settlers sought trade outlets through New Orleans (Lewis 1976:33). As a consequence, the city's early business involved trade. Mercantile structures, such as warehouses, generally were located directly on the river. Proximity to the river was attractive to residents, as well. Residential structures for prominent citizens were located in the first row of squares along the river. These squares generally correspond to former city blocks.

Due to annual flooding of the Mississippi River, artificial levees were constructed as early as 1723. These levees extended for nearly 500 toises (3,000 feet, 915 meters) in front of the early city. Shortly after completion of this levee complex in 1724, it was extended to encompass the projected upper limits of the city. Throughout the eighteenth century, the levee was approximately three feet high and twelve to twenty feet (3.7 - 7.6 m) wide. Boats pulled up to the levees, stimulating the development of docks and commercial buildings along the riverfront area (Lewis 1976:34). The land between the levee and the town, called the quay, was used primarily as a storage area for goods prior to their transshipment. The upriver end of the quay contained a windmill and slave quarters until 1760. In that year, the mill was replaced with a warehouse.

Properties within the project area under consideration here originally were granted in the 1720s by the Company of the Indies. These lands were established as plantations. However, the land located immediately upriver and downriver from New Orleans was

CHAPTER II

HISTORIC OVERVIEW OF LAND USE AND THE GROWTH OF THE PORT OF NEW ORLEANS

Introduction

This chapter provides a framework for understanding historic land use patterns along the riverfront area of New Orleans during the eighteenth and nineteenth centuries. This discussion emphasizes the identification of economic, technological, and demographic patterns of change that influenced riverfront landscape during that period. Since the study areas are located near the Vieux Carre, their development is associated closely with broader patterns of economic and demographic growth of the port of New Orleans.

Throughout its history, the riverfront area has dominated commerce in New Orleans. The use of the river as the primary transportation corridor for goods entering and leaving the city stimulated the development of a variety of riverfront economic activities. The evolving riverfront landscape revealed a mixture of industrial, commercial, and residential structures. This can be explained in part by the predominantly pedestrian nature of transportation in New Orleans and its surrounding areas during the eighteenth and nineteenth centuries. The need to house workers near their workplaces influenced the mixed land use patterns.

The colonial practice of granting lands to individuals effectively limited the amount and direction of the early growth of the city, since the lands surrounding New Orleans were plantation properties throughout most of the eighteenth century. Strips of land on either side of the Vieux Carre were utilized as commons, reserved primarily for defensive fortifications.

The period following the American acquisition of the Louisiana Territory was one of rapid expansion and economic development in the New Orleans area. Several events contributed to the growth and influence of New Orleans as a major world port. During this period, water transportation continued to be the most effective means of shipping bulk goods. The advent of the steamship greatly accelerated riverine commerce during the 1820s and 1830s, and New Orleans was a major recipient of the increased river traffic. Additionally, the westward pioneer settlement of America also caused more goods to be shipped down the Mississippi. New Orleans was the final and major port on the river. Furthermore, the rising importance of sugar and cotton as the major cash crops of the Lower Mississippi Valley, coupled with the increased demand for these products in the Northeast and in Europe, had a tremendous impact on the economy of New Orleans (Clark 1970:299).

The second half of the nineteenth century was a period of change in the riverfront areas, as railroads came to dominate the

downriver from the line of Poland Avenue. All four ramps measure thirty feet (9.2 meters) in width. The upriver boundary of the planned Independence to IHNC floodwall segment, then, begins approximately twenty-five feet (7.5 meters) upriver from the junction of Independence and Chartres Streets. Its downriver boundary is the Inner Harbor Navigation Canal.

Chartres Street. No standing structures will be impacted by this planned alignment.

Between Independence and Bartholomew Streets, the floodwall is located approximately seventy-five feet (22.9 meters) from the riverside of Chartres Street, between the NOPBR main lead track and the NOPBR river main and city main tracks. Directly upriver from Bartholomew Street, the floodwall alignment shifts northwards towards Chartres Street. The floodwall is parallel to Chartres Street in front of a wharf access ramp. The easement widens to sixty-four feet (19.5 meters) where the access ramp crosses the tracks between Bartholomew and Mazant Streets. Downriver from this ramp, the floodwall makes a ninety degree turn back towards the river. Between the ramp and Poland Avenue, the floodwall will be located approximately 115 feet (35.1 meters) from the riverside curb of Chartres Street, and the easement zone lies between 105 and 145 feet (32.0 - 44.2 meters) from the curb, extending towards the river. The floodwall continues along this line to Poland Avenue. Continuing downriver, the floodwall maintains the same distance from the former line of Chartres Street to a point slightly downriver from the former intersection of Chartres and Kentucky Streets.

In the area downriver from the former line of Kentucky Street, the floodwall shifts northward away from the river. This portion of the floodwall segment roughly follows the present curving route of the NOPBR horn track (Figure 2). Several portions of the floodwall corridor contain an easement zone up to sixty-four feet (19.5 meters) wide. The floodwall makes a turn of approximately forty-five degrees northeast in the area bounded by the former lines of Japonica and Manuel Streets. Downriver from this point, the easement intersects the former line of Chartres Street, and makes a second turn of approximately thirty-six degrees at the line of Manuel Street. It continues along the line of Manuel Street for approximately 160 feet (48.8 meters), and then makes a final ninety degree turn away from the line of Manuel Street towards the Inner Harbor Navigation Canal. The floodwall alignment extends to its intersection with the existing IHNC floodwall, a distance of approximately seventy-five feet (22.9 meters) below the final ninety degree turn. Near its downriver boundary, the planned floodwall route crosses the line of the NOPBR little horn track. This latter area, between Poland Avenue and the Industrial Canal, presently forms part of the Naval Support Activity East complex (Figure 2).

The Independence to IHNC segment also contains access ramps that extend away from the river at four locations along the floodwall route. The first ramp is located between fifty-five and eighty-five feet (16.8 - 25.9 meters) upriver from Alvar (Jeannet) Street. The second ramp is between 120 and 150 feet (36.6 - 45.8 meters) downriver from Alvar (Jeannet) Street. Both of these ramps extend to the riverside edge of Chartres Street. The third ramp extends away from the river to the foot of Poland Avenue. The final ramp lies between 120 and 150 feet (36.6 - 45.8 meters)

Montegut Streets segment. It extends from Station 521+72 at its upriver terminus to Wall Line Station 0+00 (approximately B/L Station 547+00), for a total length of 2528 feet (771.0 meters). The planned floodwall alignment in this area encompasses the riverfront of seven city blocks (Figure 2). In general, this floodwall alignment is parallel to the NOPBR city main track. Two standing structures are located within this easement. They are a modern one-story block building on the downriver side of Louisa Street, and a standing structure located just upriver from the Desire Street ramp.

Between Montegut and Clouet Streets, the floodwall alignment is parallel to the Southern Railway tracks. The easement zone extends from the landward edge of the Southern Railway track to the Pacific Molasses Company siding (Figure 2). Just upriver from Clouet Street, on the river side of the small molasses tanks, the easement includes a railroad siding gate for the Pacific Molasses Company's spur track. Downriver from Clouet Street, the floodwall again runs parallel to the NOPBR tracks, along the former line of N. Peters Street. At Louisa Street, the easement zone protrudes northward, including the locations of two railroad siding gates for spur tracks. Below Louisa Street, the floodwall again is parallel to the NOPBR city main track. The easement extends from the edge of this track into the existing blocks (Figure 2).

From Louisa Street to the downriver limit of this floodwall segment, both the easement and the railroad tracks it follows approach the center of the original city blocks that formerly were located in this area. Just upriver from the present Desire Street ramp, the floodwall protrudes northwards and takes in the area of a railroad siding gate for a spur track. Downriver from Desire Street, the easement lies largely within a presently undeveloped grassy area between Chartres Street and the railroad tracks. Between Congress and Independence Streets, the floodwall bends towards the river, where it intersects the NOPBR city main and river main tracks. Following this southward turn, the floodwall is parallel to the NOPBR main lead track.

The upriver boundary of the Montegut to Independence floodwall segment, then, coincides with the downriver limit of the previously described alignment, at the foot of Montegut Street. The downriver boundary of this segment is located approximately twenty-five feet (7.6 meters) upriver from the intersection of Independence and Chartres Streets.

Independence to Inner Harbor Navigation Canal

The Independence to Inner Harbor Navigation Canal (IHNC) floodwall segment is continuous with the previous segment. It extends from W/L Station 0+00 to a downriver terminus at W/L Station 34+38.2, for a total length of 3438.2 feet (1048.7 meters). It encompasses a river frontage of ten city blocks (Figure 2). Most of the Independence to IHNC floodwall segment is parallel to

Railroad's tracks 209 and 210. Between Governor Nicholls and Barracks Streets, an existing floodwall will be abandoned after completion of the new floodwall segment. Between Esplanade and Elysian Fields Avenues, the floodwall includes an area containing a NOPBR siding gate for the N. Peters Street team track. The floodwall then curves eastward, following the line of Louisiana and Nashville Railroad (L&N) tracks 209 and 210 to Marigny Street. At Marigny Street, the L&N and NOPBR tracks again resume a parallel course, and the floodwall alignment is parallel to those tracks. Between Elysian Fields Avenue and Port Street, the easement is located between the NOPBR city main track and the riverside curb of N. Peters Street. It also contains sections of existing L&N tracks at the foot of Marigny Street. Downriver from Marigny Street, the floodwall continues parallel to the L&N and NOPBR city main tracks, where they approach N. Peters Street.

At a point approximately midway between Mandeville (Touro) and Spain Streets, the easement abuts the riverside edge of N. Peters Street. The easement follows this route to a point between Port and St. Ferdinand Streets, where its alignment encompasses the riverside half of N. Peters Street. Where N. Peters Street ends at St. Ferdinand Street (Figure 2), a nineteenth century brick warehouse still is standing. The planned floodwall alignment shifts towards the river to avoid this warehouse.

Between St. Ferdinand and Montegut Streets, the floodwall alignment resumes a course parallel to the NOPBR city main track. The easement in this area includes the Southern Railway's city main and river main tracks. Immediately downriver from St. Ferdinand Street, the easement jags northward to include a railroad siding gate for a Southern Railway spur track. Following the former line of N. Peters Street, the floodwall then diverges northwards towards Chartres Street.

The floodwall easement in the Barracks to Montegut segment also includes four access ramps or corridors that extend landward of the planned floodwall route. The first ramp is located just downriver from the foot of Esplanade Avenue, and it extends into N. Peters Street. The next two ramps are located at the foot of Mandeville Street and at the foot of Franklin Avenue, respectively. Both of these ramps extend across the width of N. Peters Street. The final ramp extends northward to include both the downriver corner of the block located between Port and St. Ferdinand Streets, and the full width of St. Ferdinand Street. The upriver limit of the Barracks to Montegut floodwall segment, then, lies at the approximate former line of Governor Nicholls Street, where it will connect with the existing Dumaine Street floodwall. As noted previously, the foot of Montegut Street forms the downriver boundary of this floodwall segment.

Montegut to Independence

The Montegut to Independence Streets floodwall segment is continuous with and immediately downriver of the Barracks to

edge of the track area. Between Celeste Street and St. James Street, the easement zone includes an area of cobblestone paving at the junction of Celeste and S. Peters Streets. Below St. James Street, the easement is expanded slightly westward to include a small triangle of land that contains a railroad siding gate for the spur track on St. James Street. This area also lies within the former line of Water Street.

Between St. James and Richard Streets, the floodwall curves slightly westward, although it continues to parallel the NOPBR tracks. The easement here includes the downriver, riverside corner of the block that formerly was located between St. James and Market Streets. This area presently is occupied by transformers and power line structures for a steam generating station operated by New Orleans Public Service, Inc. (NOPSI).

Between Richard and Race Streets, the floodwall alignment is parallel to a spur track which runs into Race Street. The easement then jags westward away from the river, slightly above Race Street. The easement here includes land around the railroad siding gates serving spur tracks located between Race and Euterpe Streets (Figure 1).

Below Race Street, the floodwall alignment resumes a parallel course to the NOPBR inner track. This railroad track diverges slightly towards the river, away from the former line of Water Street. Upriver from the former line of Robin Street, the floodwall alignment again curves slightly westward, following the course of the river. The floodwall passes in front of the blocks between the former lines of Euterpe (Robin) and Terpsichore Streets. Downriver from Terpsichore Street, the floodwall follows the former line of Pilie Street to Thalia Street, where it makes a ninety degree turn away from the river, connecting with the existing Thalia to Poydras floodwall segment. Jackson Avenue, then, forms the upriver boundary, and Thalia Street forms the downriver boundary, of the planned Jackson to Thalia floodwall alignment. Both the upriver and downriver limits of work are designed to connect with existing floodwall alignments.

Barracks to Montegut

The Barracks to Montegut segment of the planned floodwall construction is located downriver from the Vieux Carre, on the left descending bank of the Mississippi River. Its upper extent is located at Station 486+11.5, immediately downriver from the former line of Governor Nicholls Street. It extends downriver to Station 521+72, and it is 3560.5 feet (1086 meters) long. This segment encompasses a river frontage of ten city blocks (Figure 2). The proposed Barracks to Montegut alignment also is parallel to the inner track of the New Orleans Public Belt Railroad. No standing structures will be impacted in this corridor. Between Governor Nicholls and Esplanade Avenue, the construction zone includes the ground between the railroad track and the river edge of N. Peters Street, as well as land occupied by the Louisville and Nashville

Historically, the movement of the Mississippi River has significantly influenced land use in the upriver project segment. A large portion of land to be impacted by the floodwall in the Jackson to Thalia alignment consists of batture that was formed after 1830. The planned floodwall route will traverse historic docks and wharves in this segment. However, the batture along the downriver segments of the proposed floodwall alignment has remained relatively stable over time. Although a small amount of riverbank erosion has occurred in these areas, erosion has not dramatically effected the location of historic structures in the downriver project segments. The present land use and boundaries of the proposed floodwall corridors in each of the four project areas are described below. These project area descriptions are derived from the preliminary floodwall design plans provided by the U.S. Army Corps of Engineers, New Orleans District; from visual inspection of the floodwall right-of-way; from the Reeves and Reeves (1983) report; and, from historic maps that have been used to determine the locations of former streets.

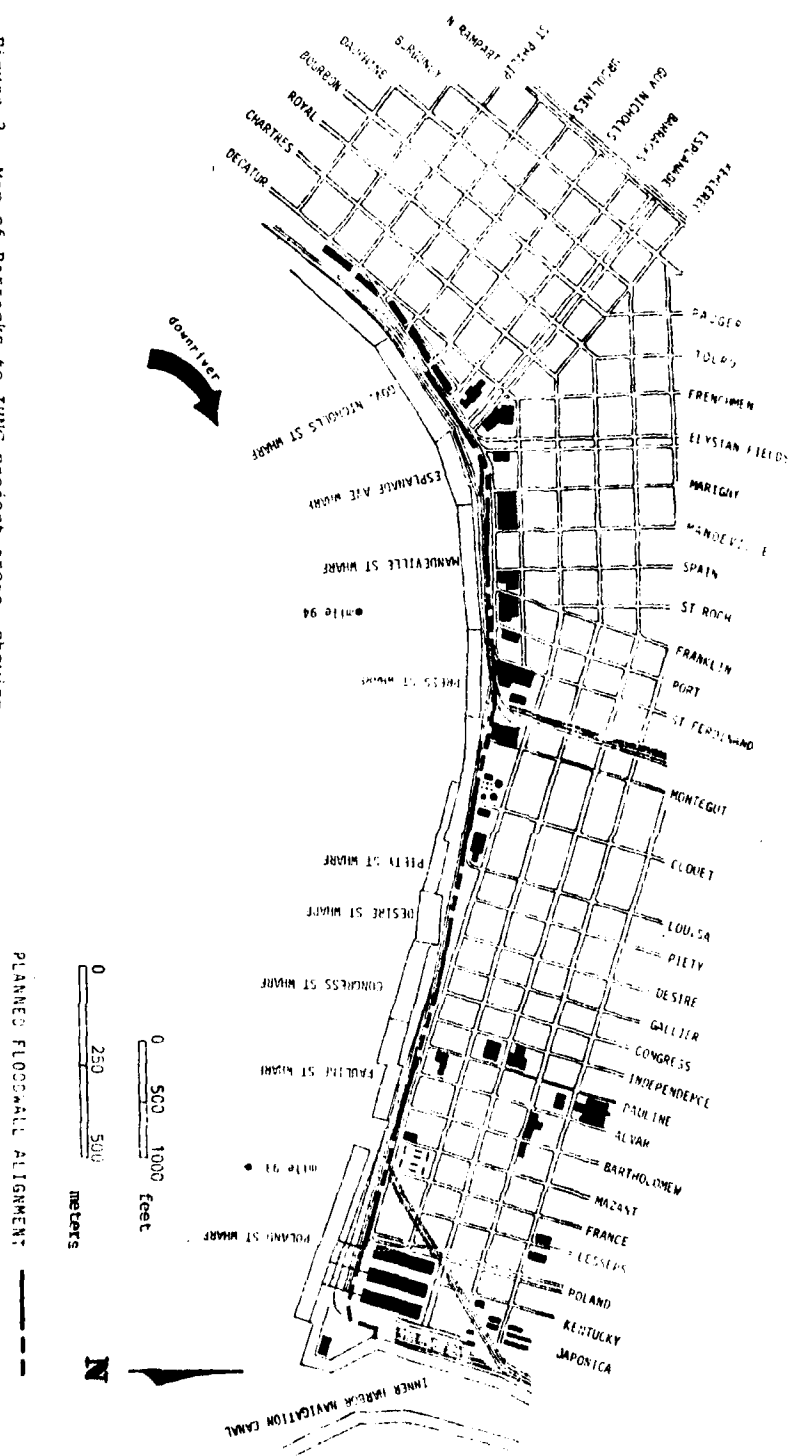
Jackson Avenue to Thalia Street

The Jackson Avenue to Thalia Street floodwall segment is upriver from the Vieux Carre, on the left descending bank of the Mississippi River. It extends from Bankline Station 333+62 at its upriver limit, to Station 402+47 downriver. It is 6885 feet (2099.9 meters) long. This segment encompasses a river frontage of fifteen blocks (Figure 1). The proposed floodwall alignment in the Jackson to Thalia segment runs parallel to the inner track of the New Orleans Public Belt Railroad (NOPBR) line, approximately ten feet (three meters) landward of the inner rail of this track. The construction easement zone along most of this alignment is twenty-five feet (7.6 meters) wide. No standing structures currently are located within the easement.

The upriver end of the planned Jackson to Thalia segment begins at the downriver end of an existing floodwall. The construction easement encompasses the river edge of Tchoupitoulas Street between Jackson Avenue and Josephine Street, and adjacent ground between the NOPBR track and the street's curb. Between Josephine and St. Mary Streets, the limits of the construction easement lie between the track and the riverside curb of Tchoupitoulas Street. The present route of Tchoupitoulas Street between Jackson Avenue and St. Mary Street was established between 1930 and 1931, when the right-of-way was straightened and set back from the river. In this area, then, the easement includes part of the former line of Tchoupitoulas Street and the river frontage of the original blocks between Josephine and St. Mary Streets.

Below St. Mary Street (Figure 1), the floodwall continues in a nearly straight line, following the former line of Water Street. The limit of the construction easement crosses the upriver apex of a triangle formed by Tchoupitoulas, Nuns, and the former line of Water Streets. Between Nuns and Celeste Streets, the easement includes the river half of former Water Street and the adjacent

Figure 2. Map of Barracks to INHC project areas, showing floodwall right-of-way (the downriver alignment).



into the river, to aid the mooring and unloading of ships. The first third of the nineteenth century was a period of extensive wharf construction. Five basic types of wharves were constructed during the nineteenth century (Reeves and Reeves 1983:102). The earliest type of wharf was a narrow finger wharf. In the 1820s, the finger wharves began to become both standardized in size and wider in proportion to their length. These wharves were flat on top. During the same period, Joseph Pilie introduced the steamboat wharf, which contained a sloping ramp cut into the wharf. The ramp was designed to expedite loading and unloading ships. Another wharf type was the nuisance wharf, a long narrow wharf that was utilized for the disposal of garbage into the river. A fourth type of wharf constructed during this period was designed so that its entire top length formed a gentle slope to the river. A final wharf type, the T-shaped wharf, contained a narrow walk with a cross wharf at its outer end. T-shaped wharves were located on the river between Jackson Square and Elysian Fields. The riverfront was lined with numerous wharves during the nineteenth century. D'Hemecourt depicted eighty-two wharves on his riverfront plans drawn between 1857 and the War Between the States.

The original boundaries of the Port of New Orleans extended from Faubourg Ste. Marie at the upriver end, to Faubourg Marigny below the city. Throughout the nineteenth century, the Port's boundaries remained roughly congruent with the city itself. New Orleans was divided into three districts or municipalities during the early nineteenth century. The First Municipality included the Vieux Carre (the original colonial city of New Orleans) between Canal Street and Esplanade Avenue. The Second Municipality was comprised by the American Sector which developed upriver from Canal Street. The Third Municipality was comprised by the neighborhoods which developed downriver from Esplanade Avenue. Numerous ordinances regulated the use of the rapidly developing Port, the first of which were published in 1808. One such ordinance enumerated precise docking locations for every kind of vessel.

By the mid 1830s, New Orleans was the leading export city in the United States, and it ranked as one of the leading ports in the world. Dramatic increases in the volume of exports and imports moving through New Orleans necessitated larger port facilities at this time. The Second Municipality designed a large portion of the riverfront for steamboat and flatboat landings. Thereafter, the largest river vessels generally anchored at the upriver end of the municipality. Steamboats landed in the center portion, and smaller craft and coasters anchored along the bank at the downriver end of the municipality (Winston 1924:204).

The Third Municipality, which included Faubourg Marigny, was less affluent than the upriver areas. Commercial development also was slower in that area, although local newspapers contended that the area's potential advantages for trade were greater than the other two municipalities. In the 1830s, citizens in Faubourg Marigny were advised to initiate programs to build wharves, dig

canals, and pave and light the streets.

During the nineteenth century, the staple agricultural commodities shipped from the port of New Orleans were cotton and sugar. Cotton was the primary commodity shipped through the port, prompting the construction of cotton presses along the riverfront. The cotton presses functioned largely as a storage area for baled cotton prior to shipment. It generally consisted of a series of warehouses situated around the periphery of a square. An open receiving area formed the center of the property, and wagons of cotton were brought there. A building on one side of the square contained a large press that compressed the cotton, which they was baled. This method of baling reduced shipping costs. In 1830, the majority of cotton presses were concentrated in Faubourg Ste. Marie, the present day Central Business District of New Orleans. Over the next decade, cotton presses moved upriver, primarily to Faubourgs Delord and Saulet. Presses located on the riverfront had their own wharves. The only cotton press located in the downriver floodwall segments prior to the War Between the States was the Levee Steam Cotton Press. It was constructed in 1832, after the purchase of one and one-half arpents of land between St. Ferdinand and Montegut Streets (Reeves and Reeves 1983:210). The property formerly had belonged to Delphine Macarty.

By the turn of the nineteenth century, sugar cane had emerged as a major Louisiana crop. As a result, the riverfront landscape acquired rum distilleries, which locally were called "guildives." One of the city's earliest distilleries, built before 1804, and owned by Cleophas Barbat, was located upriver on the square between Tchoupitoulas and S. Peters Streets, just downriver from Josephine Street. A second rum distillery, operated by Henry Clements, was built ca. 1817 in Faubourg Annunciation. In the downriver floodwall segments, an early distillery was established between 1782 and 1805 by Francois de Longuais. It was located on the square between Clouet and Louisa Streets. By the 1820s, two distilleries operated on this square. Further downriver, on the Macarty estate, a distillery was established in 1819. It was located on the levee between Mazant and Bartholomew Streets. Although the uptown faubourgs monopolized the cotton press trade, this pattern was not repeated with the distilleries. They were located in both upriver and downriver areas.

Between 1803 and 1860, New Orleans functioned primarily as a commercial center, with little manufacturing. As a result, the city contained a thriving commercial waterfront area. Between 1810 and 1840, New Orleans grew faster than any other large Americana city (Lewis 1976:37). The city expanded into the surrounding plantation properties, with Americans dominating the upriver expansion. Creoles and later Irish and German immigrants settled primarily in the downriver faubourgs. The downriver lands exhibited slower commercial development than those upriver. The area below Faubourg Marigny did not begin to be developed commercially until the 1830s, when the Levee Steam Cotton Press

purchased land. Many of the riverfront squares in the lower portion of the floodwall corridor contained large suburban houses.

Transportation technology during much of the nineteenth century necessitated the integration of residential and commercial structures. Although the upriver floodwall project area exhibited an early mixture of residential and commercial land usage, the need for housing close to the workplace diminished with improved internal transportation. Therefore, commercial activities dominated the riverfront area. The burgeoning port activity supported the establishment of storage and shipping structures, such as warehouses and cotton presses. Additionally, the construction and maintenance of levees and docks facilitated the growth of steamship commerce.

1860 - Present

After the War Between the States, New Orleans experienced a temporary decline in its importance as a major shipping center. Although the war often was blamed for this decline, the major reason for the decline can be traced to a fundamental change in transportation technology. The development of steam locomotives and of northern rail lines directly linked the Midwest with Eastern markets, reducing the commodity flow through New Orleans. However, the new technology and competing markets did not exert a permanent effect on the city's economy. River traffic revived, and New Orleans became a major southern railroad center. In the 1870s, a southern rail system was developed. New Orleans formed the hub of this network. Although the railroads usurped the river's importance for the shipment of general cargo, the river continued to be the preferred and most economical method of shipping heavy bulk goods. As a result, grain and coal were shipped through New Orleans, generally on barges. By the turn of the twentieth century, New Orleans had established a near monopoly on bulk cargo shipped from the Midwest (Lewis 1976:48). The changing composition of goods shipped through the port was reflected in the establishment of a grain elevator, and in the appearance of numerous coal yards along the riverfront. Other types of commercial and industrial establishments that emerged on the post-bellum riverfront were sugar warehouses, breweries, and ice houses.

Continued railroad development during the last two decades of the nineteenth century reshaped the use and appearance of the riverfront. Rail lines began to dominate the land adjacent to the river, and they also displaced the structures that stood in their right-of-way. However, the functional orientation of the riverfront towards shipping and commerce continued to be of primary importance. The growth of the railroads effectively expanded market areas, boosting the local economy.

The domination of the riverfront area by private railroads caused public resentment. In 1888, a group of merchants formed

the Public Belt Railroad Association as a reaction to high tariffs that the railroads charged for moving goods to and from the wharves. The goal of this organization was to provide rail access along the riverfront at reasonable prices. This goal was realized in 1900, when the City Council authorized construction of the public belt line. Its main track was laid in 1906. By the turn of the twentieth century, the Public Belt Railroad, a Levee Board that was created in 1880, and a Dock Board (Board of Commissioners of the Port of New Orleans) created in 1896, maintained public management of the riverfront. During the first decade of the twentieth century, these public boards undertook a complete overhaul of the riverfront area, including new levee construction along much of the riverfront, a new public belt railway, and new steel sheds along the river. These activities and the services they provided contributed to the resurgence of growth and activity at the Port of New Orleans during the twentieth century.

To reiterate, the foregoing discussion of historic land use along the riverfront of New Orleans in the four planned floodwall segments is drawn primarily from the research of Reeves and Reeves (1983), and from historic map data. This overview recounts the history of changing land use patterns from the founding of the city in 1718 until the turn of the twentieth century. During this two hundred year history, the Port of New Orleans became the major port of the Mississippi Valley, and the economic and commercial focus of the city. The riverfront landscape of New Orleans reflected the major economic, demographic and technological processes that influenced the growth of the port.

CHAPTER III

A CLASSIFICATION OF HISTORIC STRUCTURES IN THE FOUR FLOODWALL ALIGNMENTS

Introduction

The historic land use patterns discussed above provide a framework for classification of the historic properties that formerly were located in the four floodwall project corridors (Table 1). As a prelude to classification, locational and historic data provided in the Reeves and Reeves report (1983), in Sanborn Insurance Maps (1876, 1895 and 1896, with a 1903 update for the latter two years), and in the Braun Maps (1877), provided a basis for the compilation of an inventory or catalogue of historic structures within the various construction zones. Structures inventoried here are designated using their former locations on specific blocks, and as bounded by specified streets, rather than using street addresses. Street numbers changed over time; thus, their use would be both confusing and inaccurate. Additionally, street addresses were not available for many structures. Tables 2 through 5 catalogue historic structures identified and classified during the inventory process for each of the planned floodwall segments.

As Table 1 indicates, five major classes of structures were identified during inventory. Residential, commercial, industrial, public, and military structures all were present in the proposed floodwall alignments. In addition, there was functional overlap between some categories of structures, due to the fact that buildings occasionally were used for different purposes during successive occupations. Therefore, the primary documented use of a building was used in its classification. Specific types or categories of structures within each of the broader classes then were identified.

Residential Structures

The residential category (Table 1) included a block-long set of two-story row houses designed to provide shop space in the first floor and residential units on the second floor. No exclusively residential row houses were located in the floodwall corridors, nor were there any multiple-unit dwellings. The majority of residential structures located in the area were small to medium-sized dwellings, either single or double units. Most of these were frame one-story buildings constructed in the mid or late nineteenth century. These can be characterized either as creole cottages or as shotgun cottages adapted to the configuration of elongated city lots. None of these smaller buildings appear to date earlier than 1810. Rather, these units were built during the growth of nineteenth century suburbs above the Vieux Carre. They represented a form of relatively inexpensive housing available to working class and merchant inhabitants of these areas. Since no exclusively residential neighborhood existed in the study area,

TABLE 1. A CLASSIFICATION OF HISTORIC STRUCTURES LOCATED ALONG FLOODWALL ALIGNMENT CORRIDORS*

<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Public</u>	<u>Military</u>
Mixed residential/ commercial	Bakeries	Breweries	Alms House	Barracks
Plantation house	Boathouse	Cistern factory	Cockfighting pit	Fortifications
Small to medium-sized dwellings, single or double units	Coalyards	Cotton presses	Ferry depots	
creole cottages	Coffeehouses	Cotton seed oil mill	Passenger ferry depots	
tenements	Hauling Company	Distilleries, rum (Guildives)	Railroad ferry depots	
Suburban estates	Ice companies/Ice houses	Fertilizer Company	Firehouse	
	Lumberyards/Woodyards	Food processing plants	Gambling house	
	Oyster dealer stand	Canneries	Markets	
	Railroad freight depots	Sausage factory	Railroad passenger depots/platforms	
	Saloons/Barrooms	Foundries	Schools	
	Shops	Grain Mills	Social/Fraternal Hall	
	Blacksmiths	Feed mills		
	Cabinetmaker	Flour mills		
	Carpenter	Jute Processing Plant		
	Cooper	Rice mills		
	Sail loft	Railroad service buildings		
	Shipwright	Railyards		
Stables**	Stables**	Sawmill canal		
Stores	Stores	Sawmills		
	Drugstores	Tobacco factory		
	Groceries	Wharves and docks		
	Unspecified goods			
	Warehouses/Storage***			
	Hay			
	Tobacco			
	Unspecified goods			
	Wharves and docks			

* Small outbuildings are not treated separately. Offices serving commercial and industrial establishments are not listed as a discrete category.

** Stables associated with specific commercial, industrial, and public structures are not listed separately.

*** Warehouses and storage sheds associated with specific identified industrial establishments are not listed separately.

**TABLE 2. CATALOGUE OF HISTORIC STRUCTURES IN THE JACKSON AVENUE
TO THALIA STREET FLOODWALL SEGMENT.**

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
<u>Residential</u>		
houses	Jackson-Josephine (now Japonica)	Sanborn 1895
house	Josephine-Adele	Sanborn 1895; Reeves & Reeves (1983:198)
house	Adele-St. Andrew	Reeves & Reeves (1983:199)
house	St. Andrew-St. Mary	Reeves & Reeves (1983:199)
<u>Commercial</u>		
stores	Jackson-Josephine (now Japonica)	Sanborn 1895
stores	Josephine-Adele	Sanborn 1895
stores	Adele-St. Andrew	Sanborn 1895; Reeves & Reeves (1983:199)
store	St. Mary-Nuns	Sanborn 1895
drugstore	Josephine-Adele	Sanborn 1895
blacksmith	Josephine-Adele	Sanborn 1895
carpenter	Josephine-Adele	Sanborn 1895
saloons	Josephine-Adele	Sanborn 1895
saloon	Market-Richard	Sanborn 1876
U.S. Govt. Warehouse	Orange-Race	Sanborn 1876
tobacco warehouse	St. Mary-Nuns	Sanborn 1876; Reeves & Reeves (1983:120,122, 200)
hay warehouse	Jackson-Josephine (now Japonica)	Sanborn 1876, 1895

TABLE 2. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
Texas & Pacific Railroad freight depot	Terpsichore-Thalia	Sanborn 1895
Municipal Ice Co.*	St. James-Market	Sanborn 1895
coalyard	Jackson-Josephine (now Japonica)	Sanborn 1876
coalyard	Market-Richard	Sanborn 1895
Whann & Jute Coalyard	Orange-Race	Sanborn 1895
coalyard	Race-Euterpe (Robin)	Sanborn 1876, 1895
lumberyard	St. Andrew-St. Mary	Reeves & Reeves (1983:99,199)
lumberyard	Market-Richard	Sanborn 1876
oyster dealer	St. Andrew-St. Mary	Reeves & Reeves (1983:99,199)
<u>Industrial</u>		
Jackson Feed Mill	Jackson-Josephine (now Japonica)	Sanborn 1876,1895
Sullivan Press (later Pelican Press, Federal Congress).	St. Andrew-St. Mary	Sanborn 1876,1895 Reeves & Reeves (1983:119,122, 199)
Conrad Warehouse	St. Andrew-St. Mary	Reeves & Reeves (1983:122,199)
J. Fitzgerald Tobacco Factory	St. Mary-Nuns	Sanborn 1876; Reeves & Reeves (1983:120,122, 200)
Texas & Pacific Railroad Service buildings	Henderson-Terpsichore	Sanborn 1895; Reeves & Reeves (1983:201)

TABLE 2. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
<u>Public</u>		
cockfighting pit	St. Mary-Nuns	Sanborn 1876
Texas & Pacific Railroad passenger depot	Terpsichore-Thalia	Sanborn 1903 update
Texas & Pacific Railroad transfer ferry depot	Terpsichore-Thalia	Sanborn 1895
Texas & Pacific freight depot	Terpsichore-Thalia	Sanborn 1895
<u>Other</u>		
Nuisance wharf*	foot of Robin	1857 D'Hemecourt Map (Reeves and Reeves 1983:Figure 6)
Unusual wharf* (boatslip?)	foot of Thalia	1857 D'Hemecourt Map (Reeves and Reeves 1983:Figure 6)

* To be closely monitored

**TABLE 3. CATALOGUE OF HISTORIC STRUCTURES IN THE BARRACKS
TO MONTEGUT STREETS FLOODWALL SEGMENT.**

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
<u>Residential</u>		
houses	St. Ferdinand-Press	Sanborn 1896; Reeves & Reeves (1983:209)
houses	Press-Montegut	Sanborn 1876
rowhouses (w/stores)	Marigny-Mandeville	Reeves & Reeves (1983:45,205)
<u>Commercial</u>		
blacksmith & forge	Elysian Fields-Marigny	Sanborn 1876
shipwright*	Marigny-Mandeville	Sanborn 1876
sail loft*	Marigny-Mandeville	Sanborn 1876
brick warehouse	St. Ferdinand-Press	Sanborn 1896; Reeves & Reeves (1983:209)
Liverpool Warehouse	Press-Montegut	Sanborn 1876; Reeves & Reeves (1983:211)
Bonded Storage Warehouse	Press-Montegut	Sanborn 1876; Reeves & Reeves (1983:211)
boathouse	Franklin-Port	Sanborn 1876
coalyard	Esplanade-Elysian Fields	Sanborn 1876
<u>Industrial</u>		
Dubreuil (Marigny) Canal	Esplanade-Elysian Fields	Reeves & Reeves (1983:98,205)
National Rice Milling Co.	Press-Montegut	Reeves & Reeves (1983:211)
Levee Steam Cotton Press	St. Ferdinand-Montegut	Reeves & Reeves (1983:91-94, 209-120)

TABLE 3. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
<u>Public</u>		
Jute Processing Plant	St. Ferdinand-Press	Sanborn 1896
Hook & Ladder Co.	Elysian Fields-Marigny	Sanborn 1876
Washington Hall	Marigny-Mandeville	Sanborn 1876
Port Market House	Elysian Fields-Marigny	Sanborn 1876; Reeves & Reeves (1983:45,143)
Southern Pacific Railroad transfer ferry depot	Barracks-Elysian Fields	Reeves & Reeves (1983:143,205)
<u>Military</u>		
Fort St. Charles*	Barracks-Elysian Fields	Reeves & Reeves (1983:14-15; 73,205)

*To be closely monitored

**TABLE 4. CATALOGUE OF HISTORIC STRUCTURES IN THE MONTEGUT
TO INDEPENDENCE STREET FLOODWALL SEGMENTS.**

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
<u>Residential</u>		
houses	Montegut-Clouet	Braun 1877; Sanborn 1896; Reeves & Reeves (1983:211)
small houses	Louisa-Piety	Sanborn 1896; Reeves & Reeves (1983:215)
small houses	Elmira (now Gallier)- Congress	Braun 1877; Reeves & Reeves (1983:219)
houses	Congress-Independence	Sanborn 1896
John J. Sporn house	Clouet-Louisa	Reeves & Reeves (1983:96-97,213)
Louis B. de Clouet house*	Louisa-Piety	Reeves & Reeves (1983:215)
<u>Commercial</u>		
stores	Montegut-Clouet	Sanborn 1896
store	Clouet-Louisa	Sanborn 1896
barrooms	Montegut-Clouet	Braun 1877; Reeves & Reeves (1983:211)
blacksmith	Clouet-Louisa	Sanborn 1876
carpenter's bench	Montegut-Clouet	Sanborn 1876
Jung & Sons Coalyard	Louisa-Piety	Reeves & Reeves (1983:215)
W.G. Coyle Coalyard	Piety-Desire	Sanborn 1903 update; Reeves & Reeves (1983:216)
cooper's shop (part of hauling company)	Clouet-Louisa	Sanborn 1876

TABLE 4. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
Dennis Sheen's Hauling Company	Clouet-Louisa	Sanborn 1876, 1896; Reeves & Reeves (1983:213)
stable	Montegut-Clouet	Sanborn 1876
<u>Industrial</u>		
Miller and Pierce Sawmill*	Piety-Desire	Reeves & Reeves (1983:106,130 216)
Martin Duralde's Sawmill	Congress-Independence	Reeves & Reeves (1983:98-99,221)
Louisiana Oil Co.	Clouet-Louisa	Sanborn 1876; Braun 1877; Reeves & Reeves (1983:213)
Louisiana Oil Mill	Clouet-Louisa	Sanborn 1876
Szymanski (Atlantic) Cotton Press	Montegut-Clouet	Sanborn 1896, 1903 update
George Dunbar's Seafood Cannery*	Desire-Elmira (now Gallier)	Sanborn 1896, 1903 update Reeves & Reeves (1983:219)
Pelican Brewery	Clouet-Louisa	Sanborn 1896, 1903 update Reeves & Reeves (1983:152-154, 213)
F. de Longuais' guildive*	Clouet-Louisa	Reeves & Reeves (1983:95-97;213)
Sommereaure & Feriet Distillery*	Clouet-Louisa	Reeves & Reeves (1983:96-97)
Wm. Watson & Co. Distillery*	Clouet-Louisa	Reeves & Reeves (1983:97)
Louis Pick's Distilling and Rectifying Co.	Congress-Independence	Reeves & Reeves (1983:221-222)

TABLE 4. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
New Orleans (Soule's) Foundry*	Montegut-Clouet	Reeves & Reeves (1983:100,211)
Union Sanitary Excavating Co.	Congress-Independence	Sanborn 1896; Reeves & Reeves (1983:222)
<u>Public</u>		
Jefferson Lyceum	Louisa-Piety	Toledano <u>et al</u> ; Vol. 4:21
Washington Girls School	Louisa-Piety	Braun 1877; Sanborn 1896, 1903 update; Reeves & Reeves (1983:215)
Washington Market House	Louisa-Piety	Braun 1877; Sanborn 1896; Reeves & Reeves (1983:215)
Frascati, gambling	Louisa-Piety	Reeves & Reeves (1983:215)
<u>Military</u>		
Jackson Defense Line*	Elmira (now Gallier)-Congress	Reeves & Reeves (1983:208,217)
Touro Alms House*	Piety-Desire	Reeves & Reeves (1983:130-

*To be closely monitored

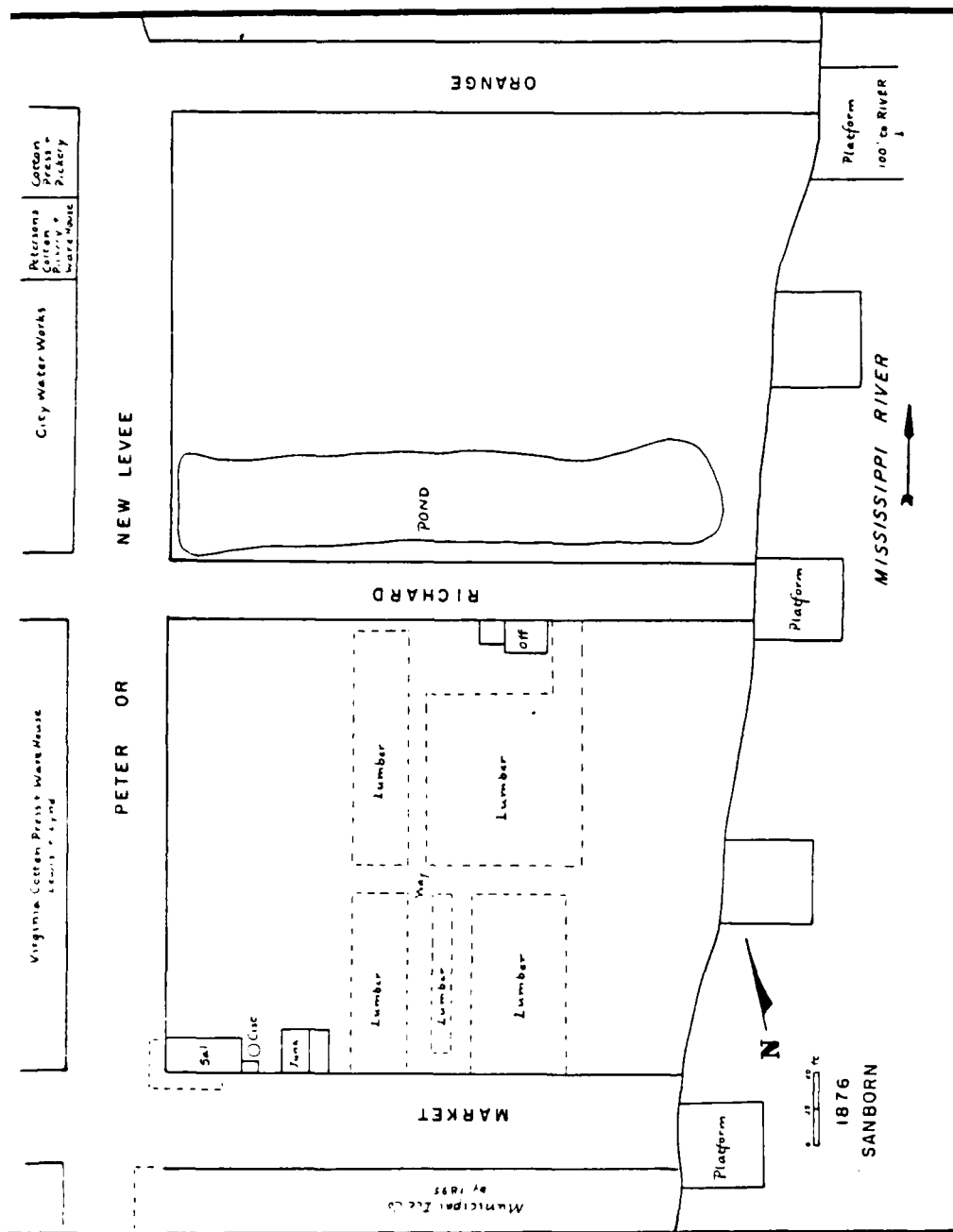


Figure 11. Redrawn Sanborn Fire Insurance Map of 1876, showing land use and standing structures between Market and Orange Streets (Jackson-Thalia Floodwall).

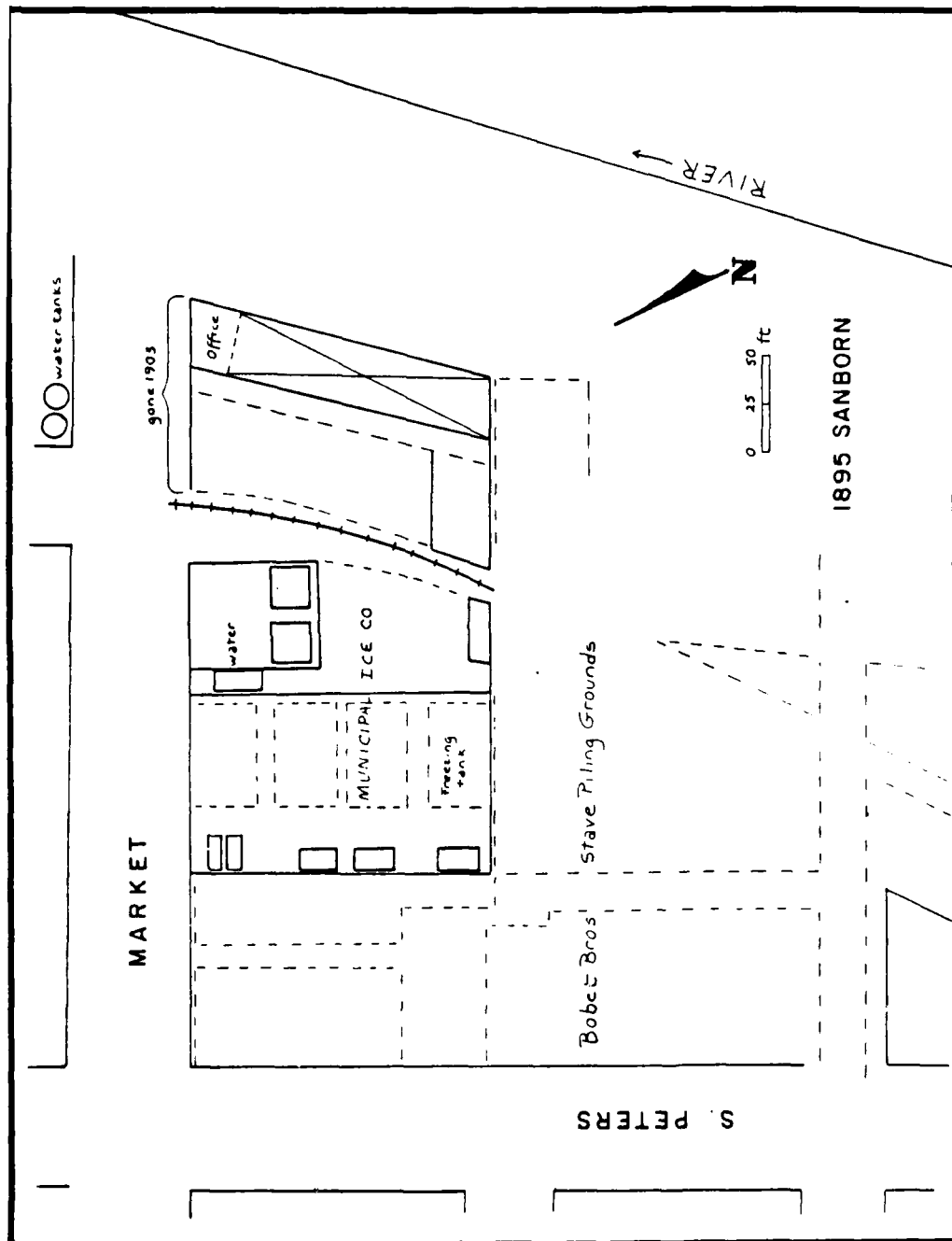


Figure 10. Redrawn Sanborn Fire Insurance Map of 1895, showing standing structures formerly located between St. James and Market Streets (Jackson-Thalia Floodwall).

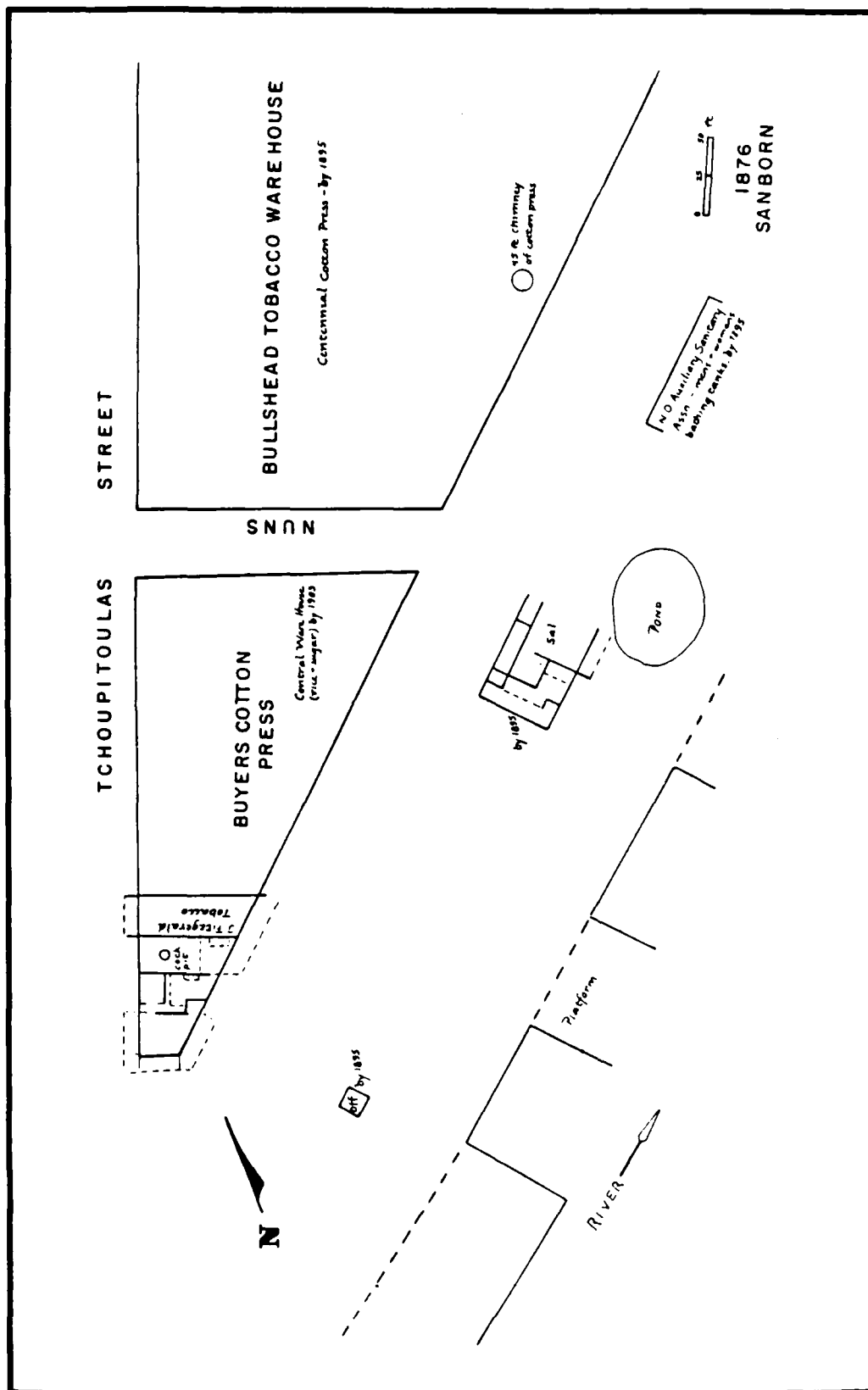


Figure 9. Redrawn Sanborn Fire Insurance Map of 1876, showing standing structures formerly located between St. Mary and Celeste Streets (Jackson-Thalia Floodwall).

which was built in the 1840s, had been acquired by a cotton press by 1876; it later was used as a rice and sugar storage warehouse (Figure 9). This change of site use may reflect a possible decline of tobacco exports after the Civil War. Other commercial establishments in the floodwall corridors included several ice manufacturing plants, which were erected in the 1890s (Figures 5 and 10). Earlier in the century, blocks of lake ice were shipped to New Orleans for the local market. By the late 1800s, refrigeration technology had displaced the use of natural ice.

Industrial Sites

During the early 1800s, lumberyards and sawmills were the first industrial sites established along the riverfront, both above and below the colonial city. The first sawmills were water-powered, and they were situated on canals dug from the Mississippi to the backswamps. By the mid-1800s, these were supplanted by steam sawmills. Several were located in the route of the floodwall below Barracks Street. These early lumberyards relied heavily on local timber supplies. Early sawmills above Thalia Street were located behind the floodwall area. The lumberyards located above Thalia Street also utilized salvaged lumber obtained from flatboat breakers (Figure 11). Later in the century, after production centers for lumber had shifted away from the city, the growth of the city accelerated and real estate values rose. Urban lumberyards consolidated into fewer and larger establishments, with more sophisticated machinery (Figure 12). In the vicinity of the lumberyards above Thalia Street, sheds on the batture were rented to oyster dealers in the 1830s. The oysters probably were brought from the Barataria Bay region by way of the Gardere Canal in Harvey, or through the Company Canal in Westwego, the latter improved in the 1830s.

Distilleries for the production of rum from sugar cane were established in Louisiana in the eighteenth century. The earliest rum distillery in the study area was owned by M. Francois de Longuais. Built prior to 1800, it was located between Clouet and Louisa Streets, in the Montegut to Independence Floodwall Corridor. In the 1820s, three small distilleries operated along the riverfront downriver from Elysian Fields. They were located near the riverbank, perhaps to guarantee a water supply as well as to facilitate the shipment of cane syrup and liquor. After 1850, a single distillery operated in the lower waterfront; it closed later in the century.

In the 1830s, cotton presses were established above and below the Vieux Carre. The construction of these presses signaled a technological advance in shipping; thereafter, ginned and baled cotton were further compressed using specialized equipment. The grounds of these plants consisted largely of sheds or warehouses used for the storage of the cotton (Figures 13,14,15,16). The machinery took up very little of this space. A single press was established below the city before the Civil War; a number operated in the developing warehouse district upriver. Above Thalia

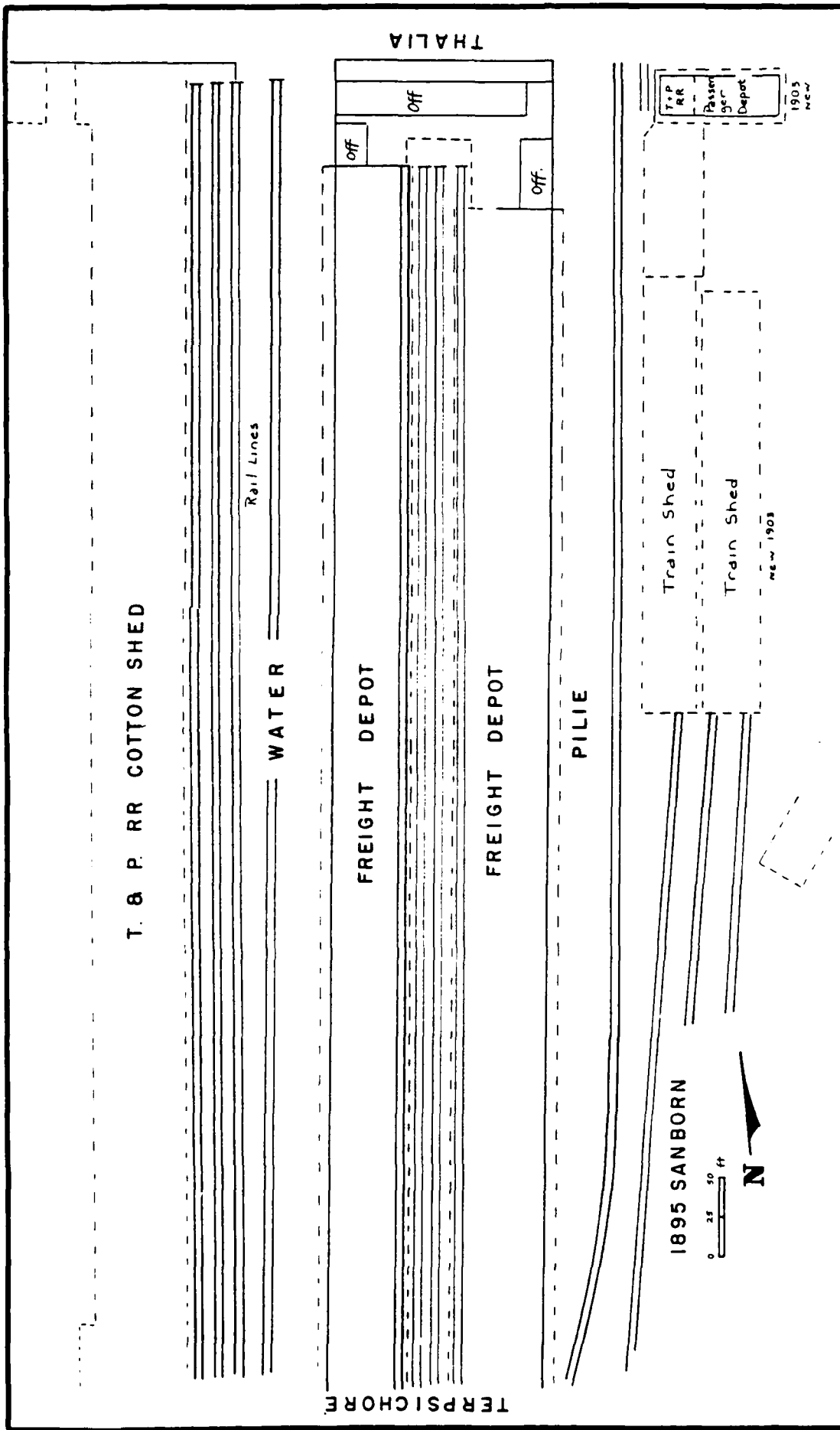


Figure 8. Redrawn Sanborn Fire Insurance Map of 1895, showing land use and former standing structures between Terpsichore and Thalia Streets (Jackson-Thalia Floodwall).

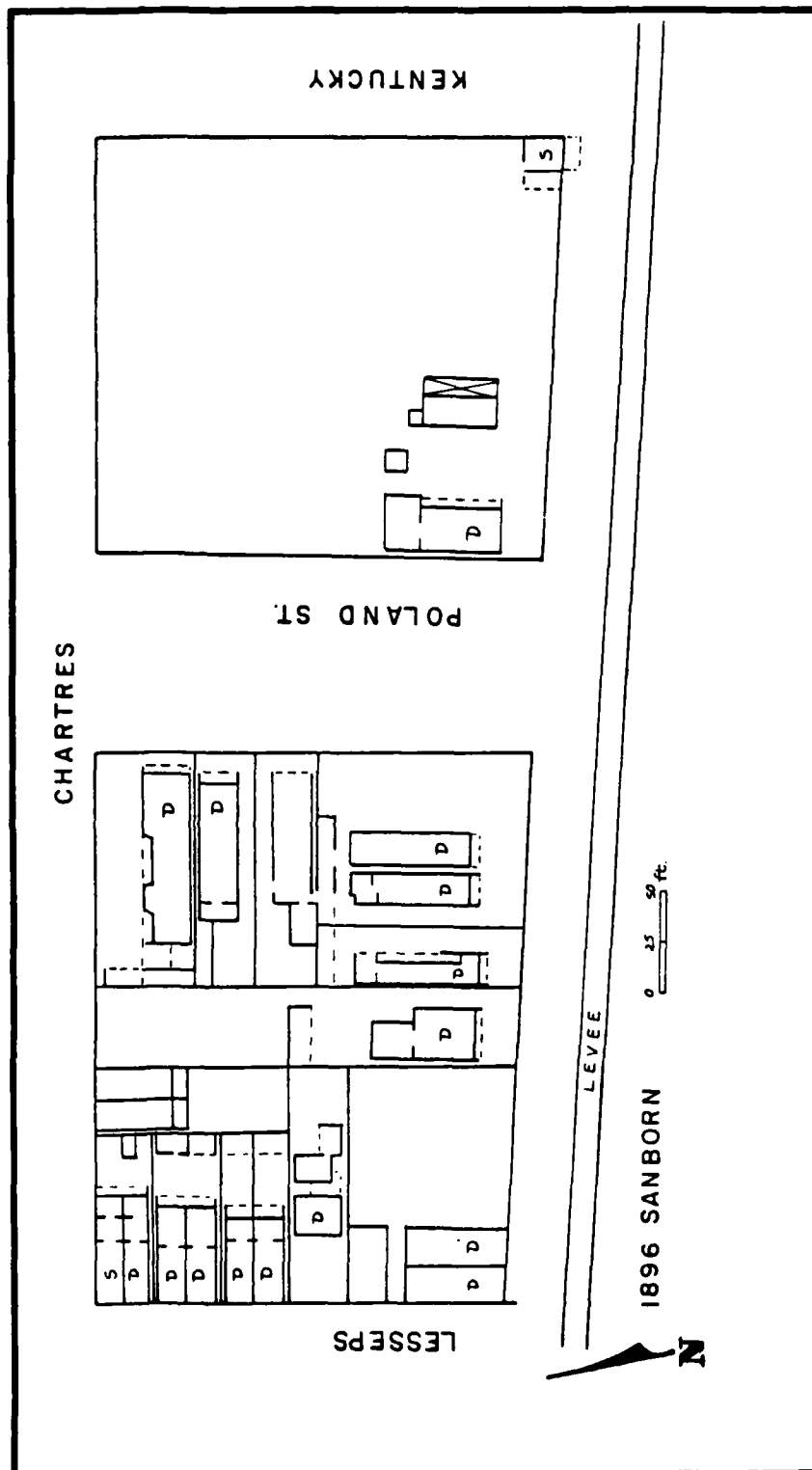


Figure 7. Redrawn Sanborn Fire Insurance Map of 1896, showing standing structures formerly located between Lesseps and Kentucky (Alexander) Streets (Independence-IHNC Floodwall).

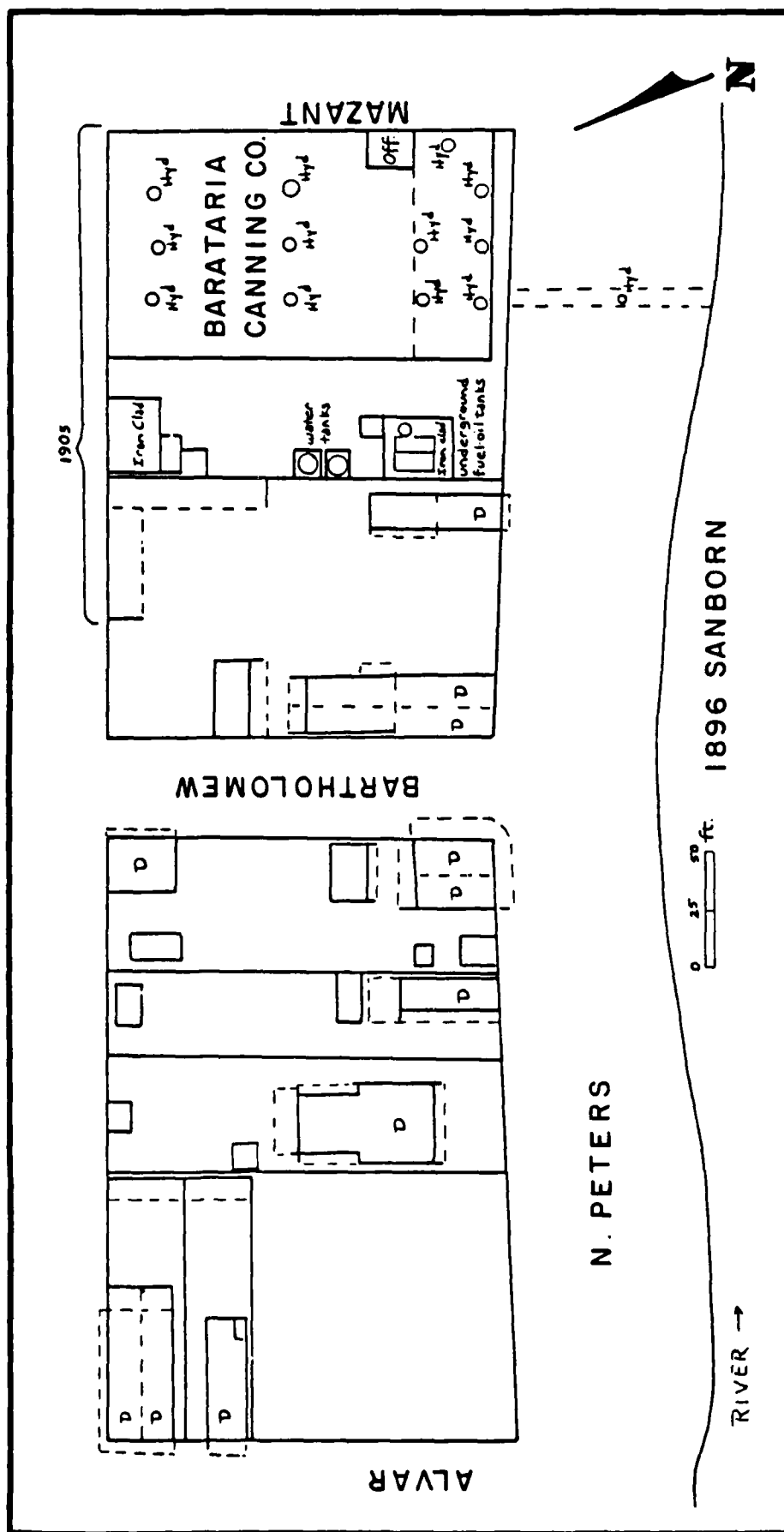


Figure 6. Redrawn Sanborn Fire Insurance Map of 1896, showing standing structures formerly located between Alvar (formerly Jeannet) and Mazant Streets (Independence-IHNC Floodwall).

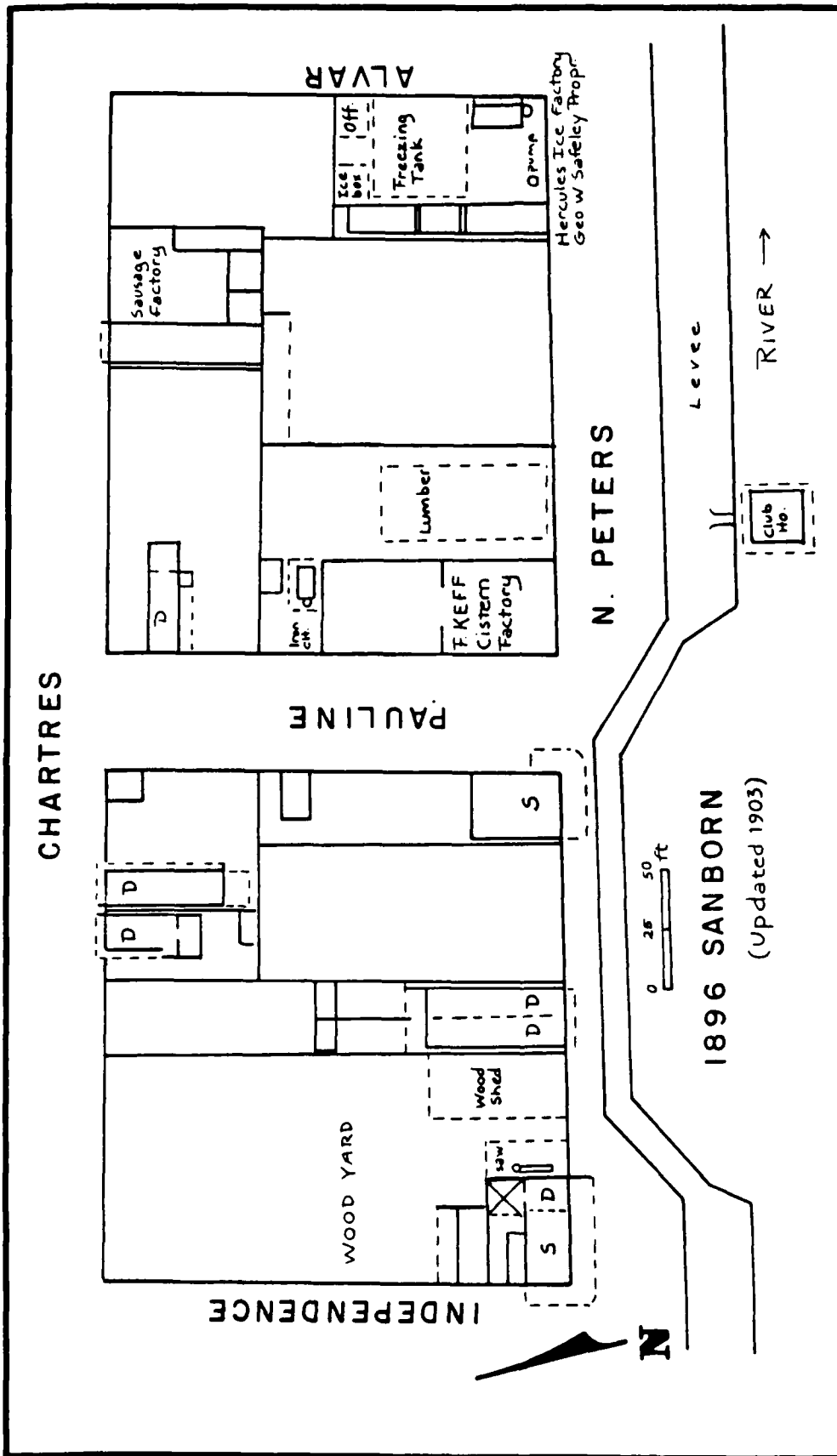


Figure 5. Redrawn Sanborn Fire Insurance Map of 1896, showing standing structures formerly located between Independence and Alvar (formerly Jeannet) Streets (Independence-IHNC Floodwall).

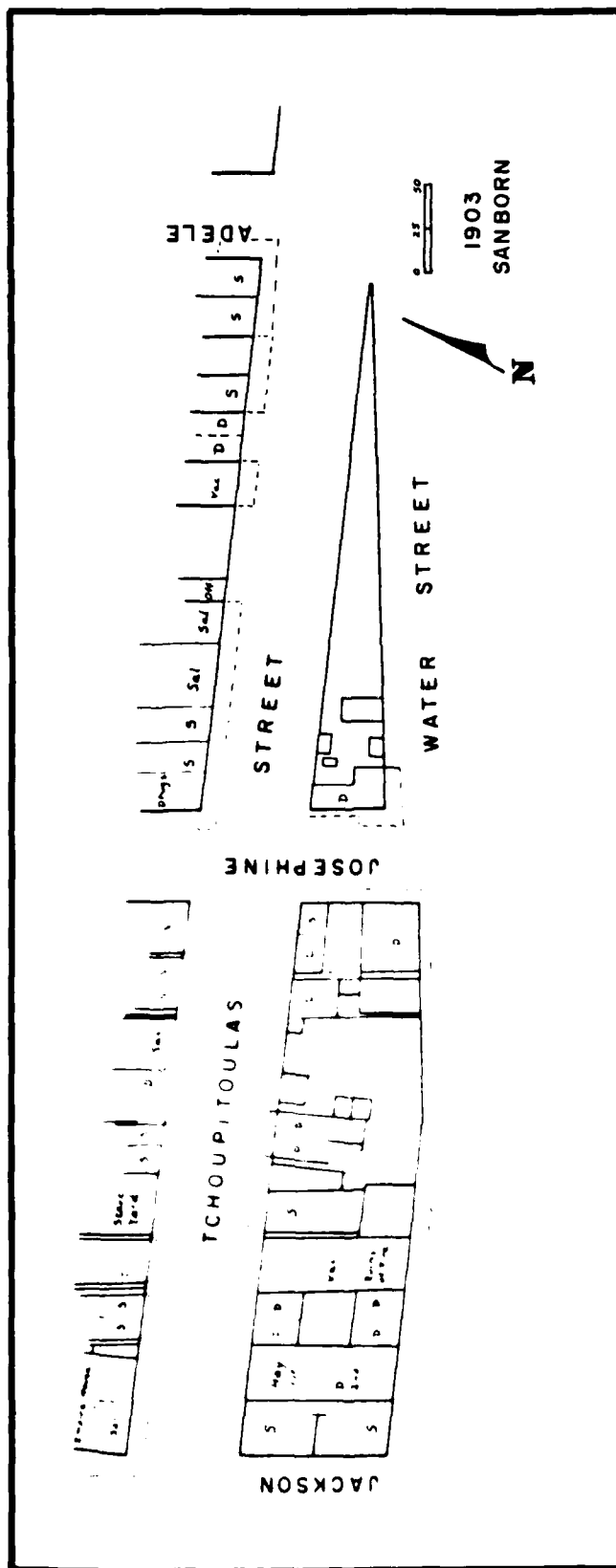


Figure 4. Redrawn Sanborn Fire Insurance Map of 1903, showing standing structures formerly located between Jackson and Adele Streets (Jackson-Thalia Floodwall).

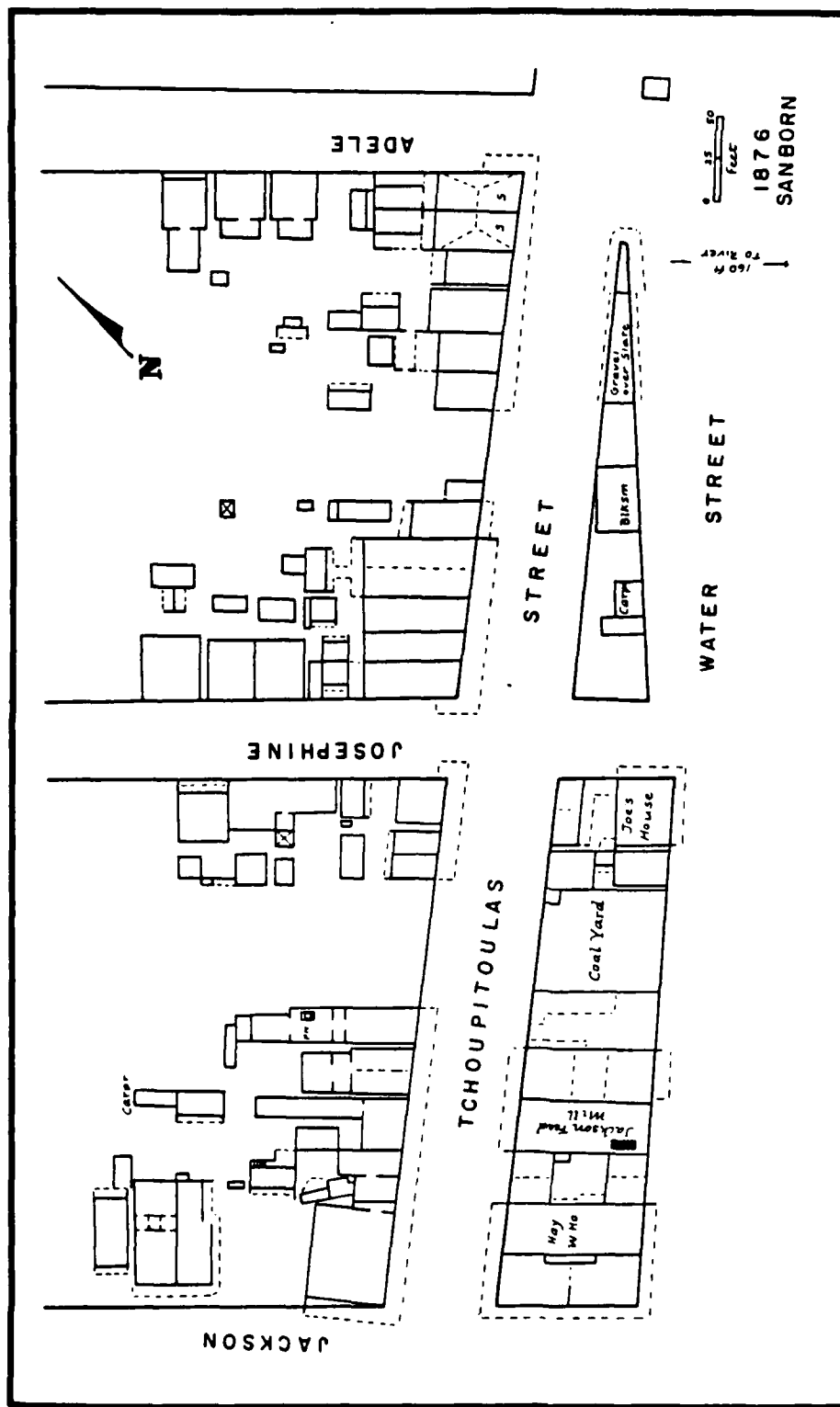


Figure 3. Redrawn Sanborn Fire Insurance Map of 1876, showing location of standing structures formerly located between Jackson and Adele Streets (Jackson-Thalia Floodwall).

these smaller houses generally were located in the mixed residential-commercial blocks between Jackson Avenue and Adele Street (Figures 3,4), and between St. Ferdinand and Kentucky Streets (Figures 5,6,7).

In the late nineteenth century, a number of houses were demolished for the construction of commercial or industrial sites along the waterfront. Several plantation great houses were located in the riverfront area below New Orleans, either in the blocks fronting the river or set slightly farther back from the levee. These houses were converted to other uses during the first half of the nineteenth century, and all of them eventually were demolished as the original plantation holdings were subdivided for sale. During the 1820s and 1830s, several mansions were erected on suburban estates below the city. However, no such structures were constructed in the area of the floodwall segment above Thalia Street. The blocks immediately below Jackson Avenue already had been commercially developed by 1830, and the new batture lands below St. Mary Street were utilized for commercial and industrial buildings after this date.

Commercial Structures

Commercial structures located along the planned floodwall route included both small establishments operated by an individual or a family, and larger mercantile companies that dealt in specialized merchandise. Grocery stores and saloons were dispersed throughout the mixed residential-commercial neighborhoods (Figures 4,5). The only bakeries noted in the study area were located in a predominantly residential neighborhood below Independence Street. A blacksmith's shop faced the port market below Elysian Fields, and a nearby shipwright, a sail loft, and a boathouse also served the waterfront (Reeves and Reeves 1983:206,207). Other craftsmen, such as a carpenter and cabinet maker, lived in the Faubourgs below Elysian Fields. Several warehouses were established in both the upper and lower floodwall segments. After 1880, the Texas and Pacific Railroad erected large freight depots above Thalia Street (Figure 8).

A commercial hauling company, with its own blacksmith and cooper's shop, and a stable, was located near several storage warehouses below Elysian Fields (Reeves and Reeves 1983:214). These served the urban traffic of New Orleans as the city continued to grow downriver late during the nineteenth century. Other small warehouses for unspecified goods were located along the riverfront in the downriver sections. Some of these warehouses had their own adjacent stables.

A hay warehouse was located near a feed mill below Jackson Avenue during the second half of the nineteenth century (Figure 3). These establishments probably served both commercial and private customers. Several brick tobacco warehouses were constructed below the Vieux Carre during the 1830s. These were demolished in the 1870s. A tobacco warehouse located in the upriver segment,

TABLE 5. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
New Orleans Tobacco Warehouse Co.	Alexander (now Kentucky)-Josephine (now Japonica)	Reeves & Reeves (1983:121,232)
Jacob Emmer's (Hercules) Ice House	Pauline-Jeannet (Alvar)	Sanborn 1896, 1903 update; Reeves & Reeves (1983:225)
woodyard	Independence-Pauline	Sanborn 1896, 1903 update
<u>Industrial</u>		
Barataria Canning Co.*	Bartholomew-Mazant	Sanborn 1896; Reeves & Reeves (1983:228)
Home Brewing Co.*	Pauline-Jeannet (Alvar)	Reeves & Reeves (1983:225)
F. Keff Cistern factory	Pauline-Jeannet (Alvar)	Sanborn 1896, 1903 update; Reeves & Reeves (1983:225)
Lambou & Noel Lumber Co. (sawmill)*	Alexander (Kentucky) - Josephine (Japonica)	Sanborn 1896; Reeves & Reeves (1983:121,133)
David Olivier Distillery	Bartholomew-Mazant	Reeves & Reeves (1983:97)
Sausage factory	Pauline-Jeannet (now Alvar)	Sanborn 1896, 1903 update

*To be closely monitored

TABLE 5. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
Albert Piernas house	Mazant-France	Reeves & Reeves (1983:228-229)
Francois Gardere house	Lesseps-Poland	Reeves & Reeves (1983:232-233)
<u>Commercial</u>		
blacksmith	Alexander (now Kentucky)-Josephine (now Japonica)	Sanborn 1896
stores	Independence-Pauline	Sanborn 1896, 1903 update
stores	France-Lesseps	Sanborn 1896, 1903 update
store	Lesseps-Poland	Sanborn 1896, 1903 update
grocery store and coffeehouse	Mazant-France	Reeves & Reeves (1983:229)
grocery	France-Lesseps	Braun 1877; Sanborn 1896, 1903 update
carpenter's shop	Alexander (now Kentucky)-Josephine (now Japonica)	Braun 1877; Sanborn 1896, 1903 update
cabinet maker	Independence-Pauline	Braun 1877
bakery	Mazant-France	Braun 1877; Sanborn 1896, 1903 update
barroom	Independence-Pauline	Braun 1877; Reeves & Reeves (1983:222)
saloon	Jeannet (now Alvar) - Bartholomew	Braun 1877
warehouse	France-Lesseps	Sanborn 1896, 1903 update
storage building	France-Lesseps	Sanborn 1896, 1903 update

TABLE 5. CATALOGUE OF HISTORIC STRUCTURES IN THE INDEPENDENCE STREET TO IHNC FLOODWALL CORRIDOR.

<u>Category/Structure</u>	<u>Location</u>	<u>Reference</u>
<u>Residential</u>		
houses	Independence-Pauline	Sanborn 1896, 1903 update; Reeves & Reeves (1983:222)
houses	Pauline-Jeannet (now Alvar)	Sanborn 1896, 1903 update; Reeves & Reeves (1983:225)
houses	Jeannet (now Alvar) - Bartholomew	Sanborn 1876,1896, 1903 update; update; Reeves & Reeves (1983:225-226)
houses	Bartholomew-Mazant	Sanborn 1896, 1903 update Reeves & Reeves (1983:226)
houses	Mazant-France	Sanborn 1896, 1903 update Reeves & Reeves (1983:229)
houses	France-Lesseps	Sanborn 1896, 1903 update Reeves & Reeves (1983:229-230)
Conrad Wichterich Cottage	France-Lesseps	Reeves & Reeves (1983:229-230)
Nicolas Goetz house	France-Lesseps	Reeves & Reeves (1983:229-230)
houses	Lesseps-Poland	Sanborn 1896, 1903 update; Reeves & Reeves (1983:230-232)
Peter Goetz house	Lesseps-Poland	Reeves & Reeves (1983:229)
house	Poland-Alexander (now Kentucky)	Sanborn 1896

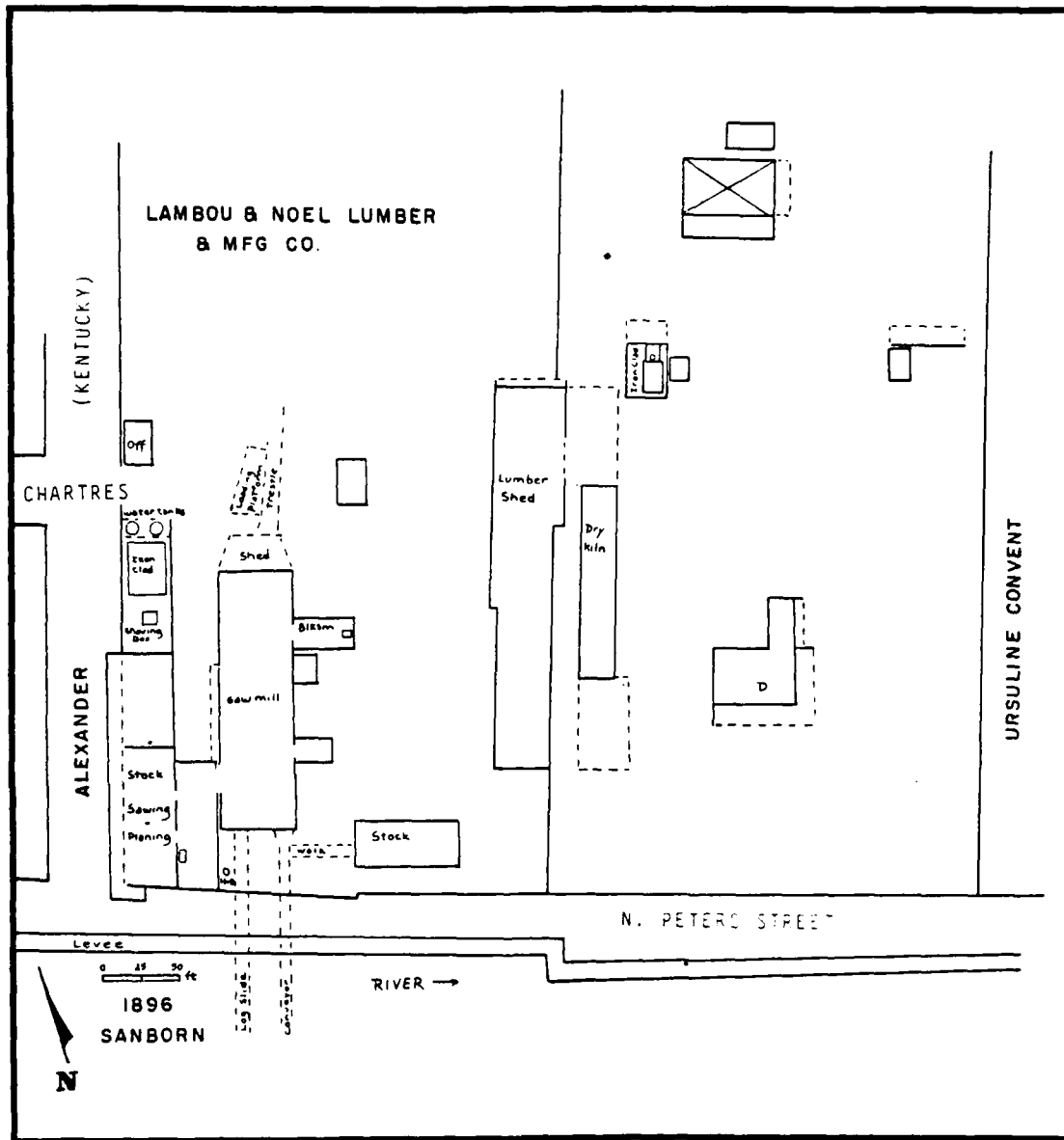


Figure 12. Redrawn Sanborn Fire Insurance Map of 1896, showing standing structures formerly located downriver from Kentucky (Alexander) Street (Independence-IHNC Floodwall).

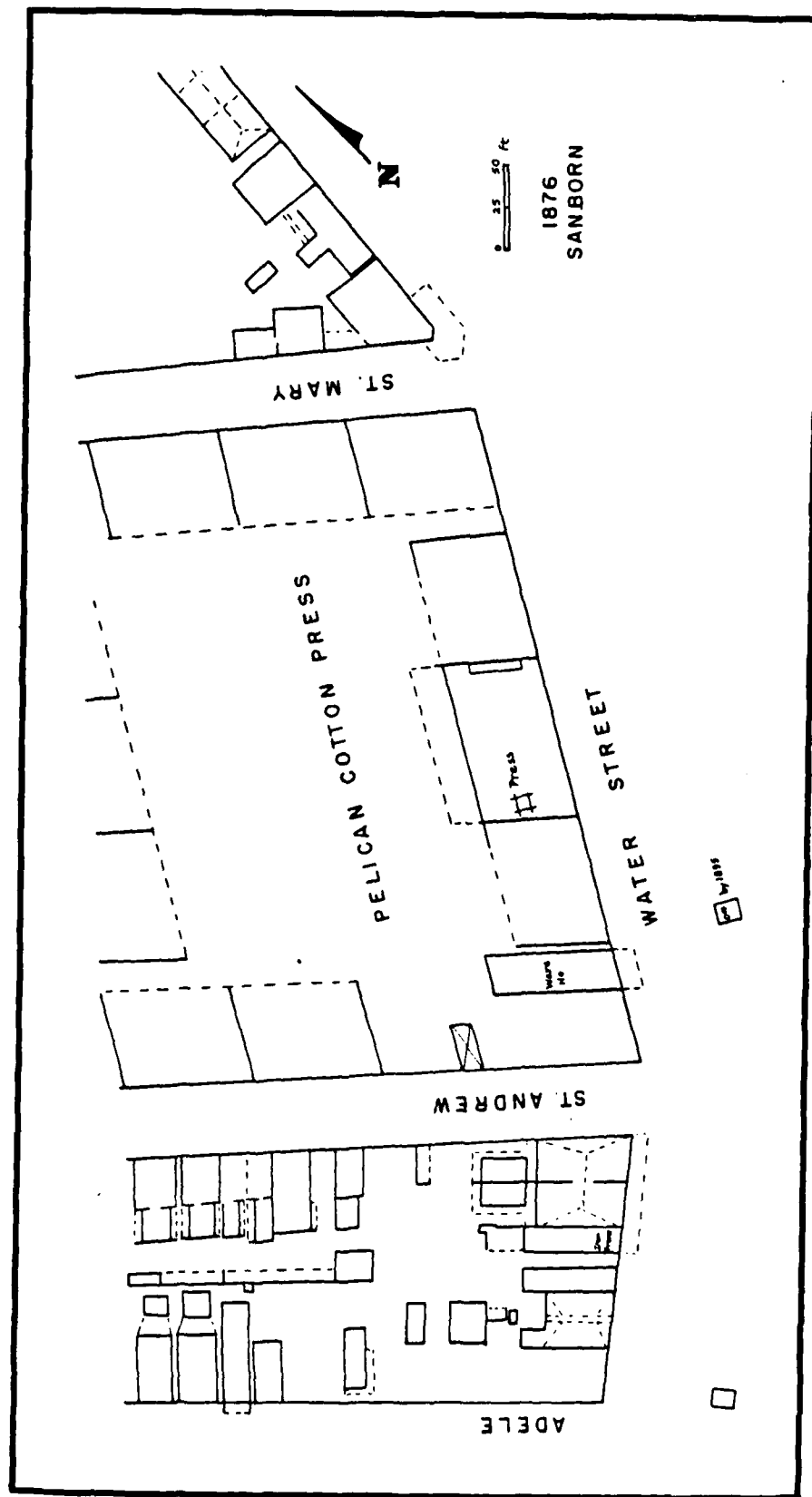


Figure 13. Redrawn Sanborn Fire Insurance Map of 1876, showing standing structures formerly located between Adele and St. Mary Streets (Jackson-Thalia Floodwall).

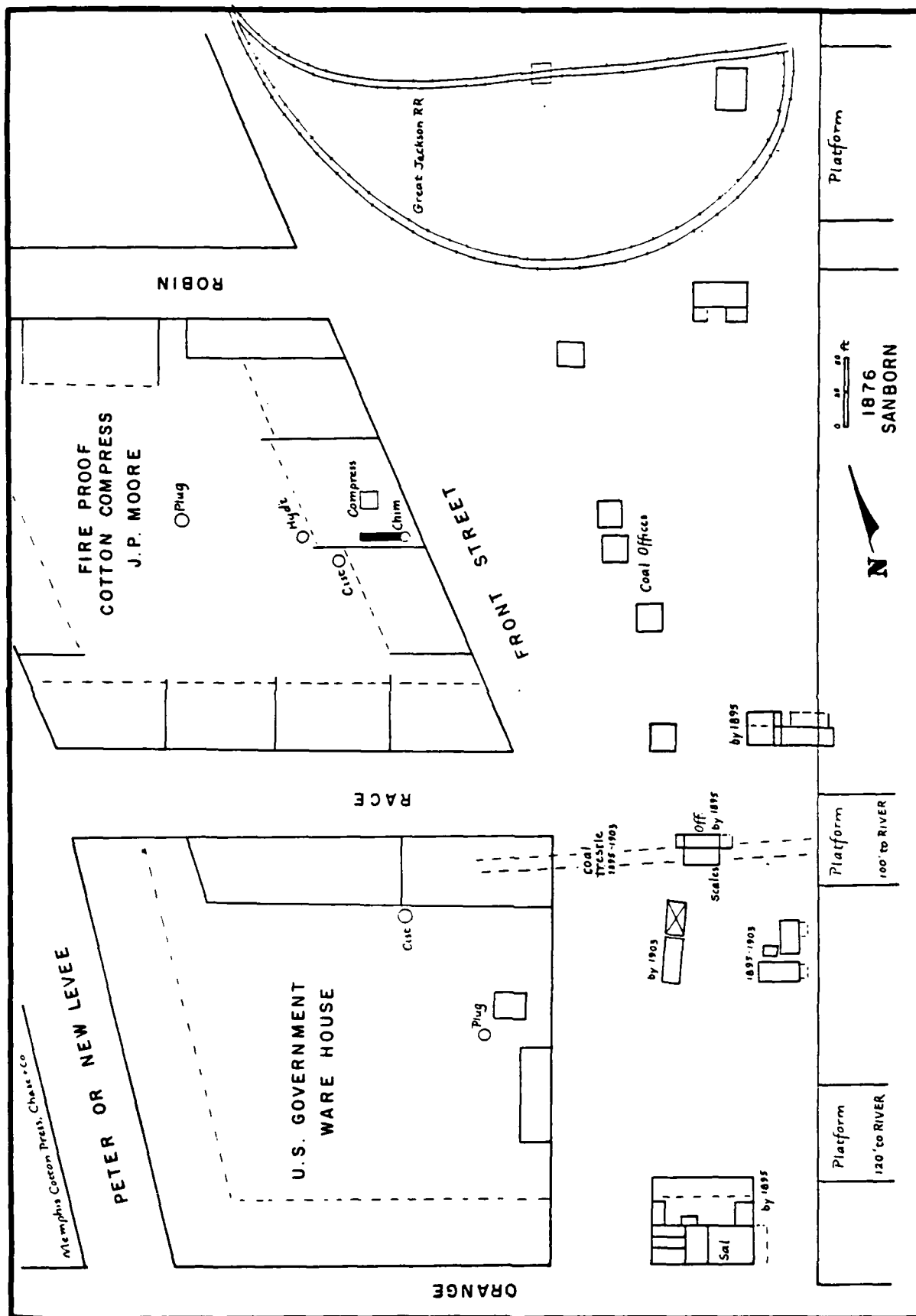


Figure 14. Redrawn Sanborn Fire Insurance Map of 1876, showing standing structures formerly located between Orange and Robin Streets (Jackson-Thalia Floodwall).

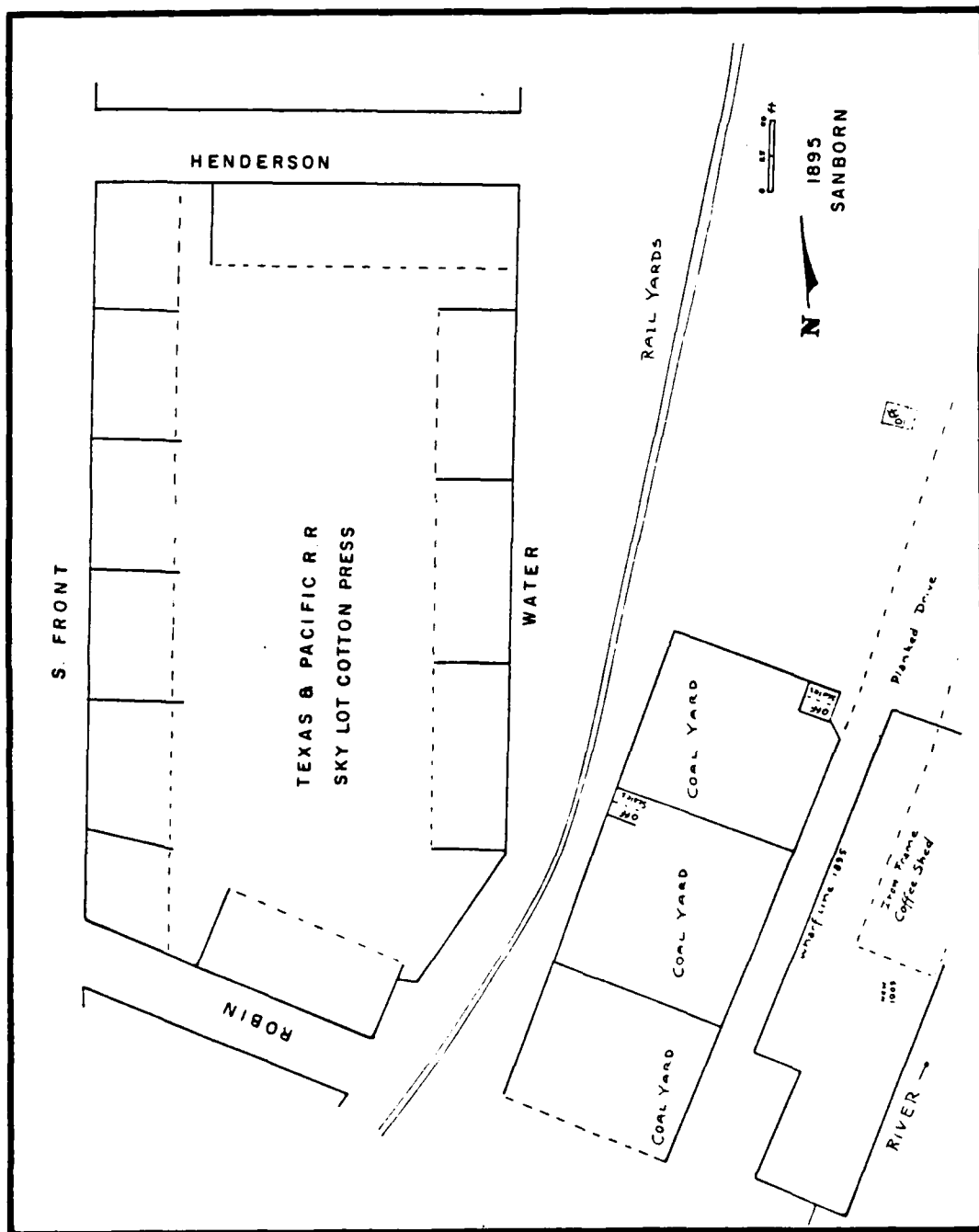


Figure 15. Redrawn Sanborn Fire Insurance Map of 1895, showing standing structures formerly located between Robin and Henderson Streets (Jackson-Thalia Floodwall).

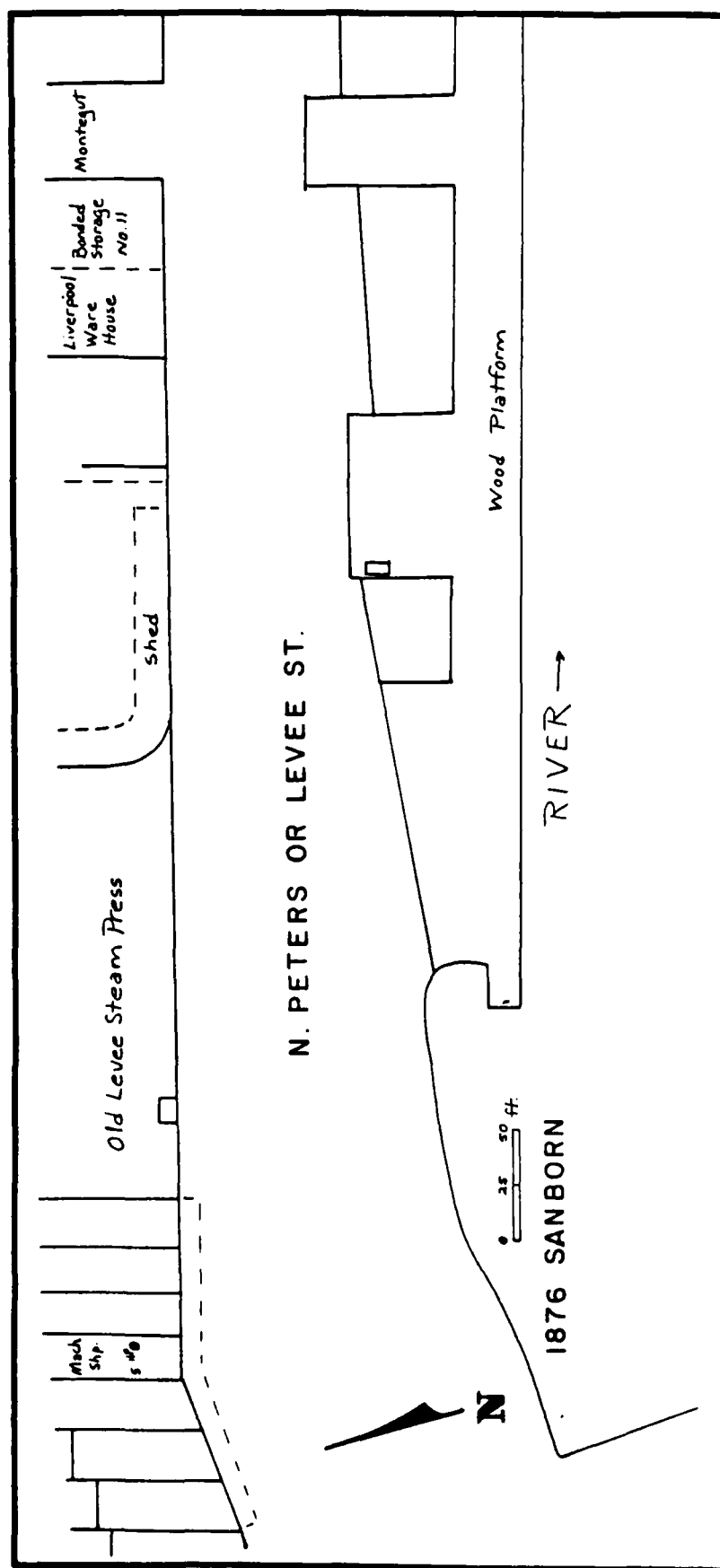


Figure 16. Redrawn Sanborn Fire Insurance Map of 1876, showing standing structures formerly located between St. Ferdinand and Montegut Streets (Barracks-Montegut Floodwall).

Street, the floodwall route should cross a number of ante bellum wharves that served the cotton presses of the American Sector. A coalboat landing below Robin Street became the site of the Union Cotton Press Wharves ca. 1840. An unusual dock structure, perhaps a double boat slip, is depicted at the foot of Thalia Street on D'Hemecourt's Map (1857). Its function may have been related to activities of the cotton presses in that area.

Cotton seed mill presses appeared in the city after the Civil War. They were a significant feature of industry in the region in the post war period, from 1865 until 1885. Cotton seed oil was used in the manufacture of soap and other commercial products. Its appearance marks the beginning of the chemical industry in Louisiana, one aspect of the emergence of diversified light industry. The economic role of New Orleans shifted from that of primarily an entrepot for the export of raw materials and agriculture products, to that of a commodities processing center. From the 1880s, the growth of an effective railroad network in the state enabled cotton presses and plants to relocate in smaller cities and towns. Cotton seed mills eventually disappeared from the city.

Another facet of the chemical industry in New Orleans was the manufacture of fertilizer. The Union Sanitary Excavating Company was organized in 1885 for the purpose of manufacturing fertilizer from waste dirt (Reeves and Reeves 1983:222). This firm operated a large wharf facility through the turn of the century, between Congress and Independence Streets (Figure 17).

Grain mills also appeared in the study area after the Civil War. A feed mill, close to a hay warehouse, was located near Jackson Avenue; it supplied food for horses (Figure 3). In the period between 1869 and 1875, the production of rice in Louisiana increased rapidly. Until the end of the century, New Orleans was a center for rice mills. The downriver floodwall segment contained one rice mill in 1892. A flour mill was established nearby at a later date.

Several small industrial plants prepared products for human consumption. Bullshead Tobacco Factory was located upriver in 1875, between Nuns and St. Mary Streets. By 1895, this facility was used by the Centennial Cotton Press (Figure 9). Most New Orleans breweries were begun as small family enterprises by mid-nineteenth century German immigrants. Later in the century, production was dominated by several large companies. The Pelican Brewery, established downriver between Clouet and Louisa Streets, was in operation from ca. 1877 to 1890. It was one of the area's major businesses. Farther downriver, the Home Brewing Company occupied a lot between Pauline and Alvar Streets from 1892 to 1894, although it is unclear if a brewery actually operated in this location.

An unnamed sausage factory, consisting of several one-story frame buildings adjoining a dwelling, also was located between

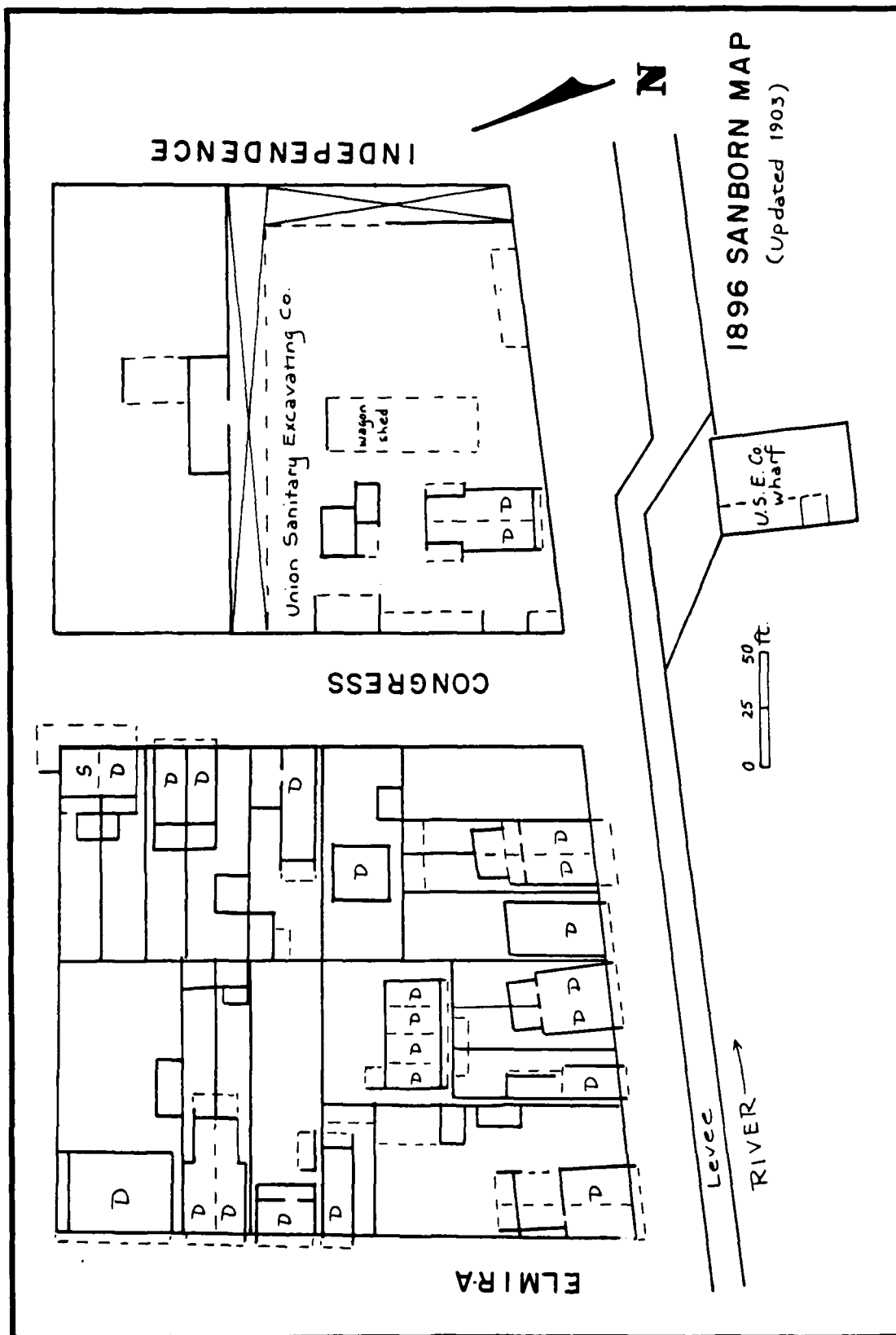


Figure 17. Redrawn Sanborn Fire Insurance Map of 1896, showing standing structures formerly located between Elmira (now Gallier) and Independence Streets (Montegut-Independence Floodwall).

Pauline and Alvar Streets in 1895 (Figure 5). This was probably a family operation that supplied local consumers. More significant to the Louisiana economy was the canning industry, which began shortly after the Civil War and grew steadily through the turn of the century. The Dunbar family led in the local canning of seafood; by 1877, they had opened a cannery in the downriver segment, between Desire and Elmira Streets. The Barataria Canning Company opened between Bartholomew and Mazant Streets in 1899 (Figure 6).

New Orleans had very little heavy industry in the period before the Civil War. One of the city's earliest foundries, financed by Pierre Soule, opened in 1831 in the Montegut to Independence floodwall segment. After the war, the site was utilized for a cotton press. A number of ante bellum foundries operated above Canal Street, but none were located in the floodwall area. By the late nineteenth century, specialized manufacturing plants had developed out of the lumber industry. A single example of this type of industry in the project study area was a cistern factory in the Montegut to Independence floodwall segment (Figure 5). It operated from the 1880s into the twentieth century; at that time, the factory would have used cypress planks for the construction of water storage tanks.

Another aspect of the industrial development of the area involved the growth of railroad facilities. In the floodwall corridor, railroad structures generally post date the 1870s. Texas and Pacific railyards were established between Henderson and Thalia Streets (Figures 8,18). The Southern Pacific Railroad and the Louisville and Nashville line established yards between Esplanade Avenue and Mandeville Street. The Texas and Pacific Railroad had several small service buildings adjoining its railyards; these were demolished before 1903 (Figure 18). The company also constructed a number of freight depots and sheds at the lower end of the railyard (Figure 8).

Public Structures

Public structures in the floodwall project areas include all governmentally or privately owned buildings or transportation facilities which served the general community, or that provided social and recreational facilities. No churches or theatres were located in any of the four floodwall segments under consideration here. Several educational and charitable institutions were located in the downriver segments. Two schools operated in the block between Louisa and Piety Streets. The Jefferson Lyceum occupied the former de Clouet plantation house in the early 1830s, and the Washington Girls' School was located in this block later in the decade. The Touro Alms House was built one block below. Construction of the Alms House began in 1858, and the unfinished building was utilized by the Union Army from 1862 until 1865. It never saw actual service as an alms house.

A Hook and Ladder Company was present by the Port Market in the

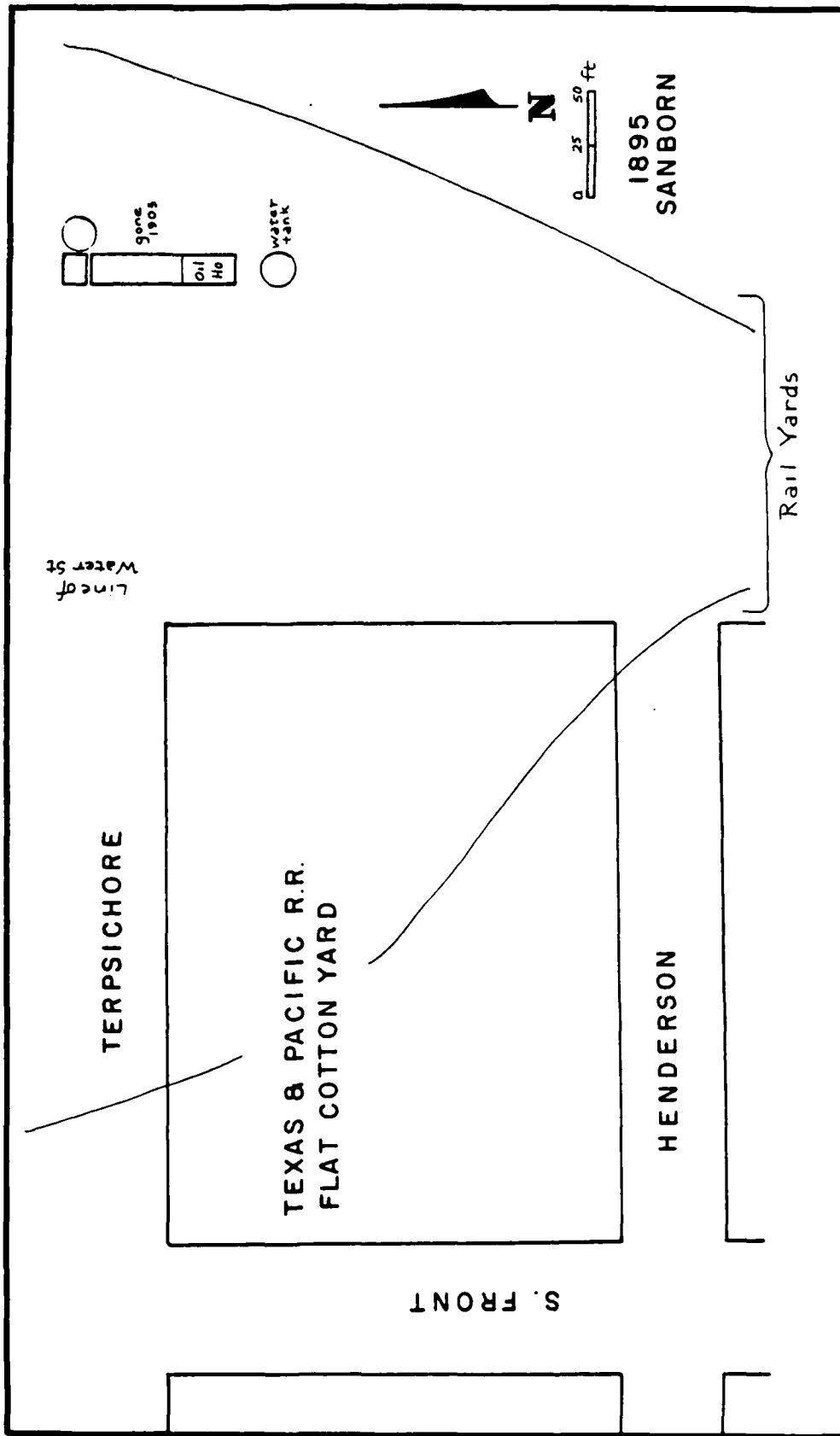


Figure 18. Redrawn Sanborn Fire Insurance Map of 1895, showing land use and former standing structures between Henderson and Terpsichore Streets (Jackson-Thalia Floodwall).

1870s. Its services were used in both the Creole Faubourgs and in the lower Vieux Carre. At this date, there were few waterfront structures other than wharves; protection of riverside buildings probably was not a major factor in the location of the fire hall. One block below the fire station, between Marigny and Mandeville Streets, one of the buildings was known as "Washington Hall" in the 1870s. It may have been a social or fraternal hall, although its function was not elucidated in the Reeves and Reeves report (1983:207). A recreational facility located downriver was the Frascati, an amusement center or gambling house, which occupied the former de Clouet house during the early 1800s. A cockfighting pit was located in the upriver warehouse district in 1876 (Figure 9). Its customers may have included river boatmen from the waterfront, as well as residents of the nearby neighborhoods.

Transportation facilities in the study area included ferry landings or depots, and railroad passenger depots (Figures 8,19,20). The Jackson Avenue and Third District pedestrian ferries both began operations in the mid-nineteenth century. They continued in use well into the twentieth century. The docks or landings for these two ferries were moved or rebuilt several times. The Texas and Pacific and Southern Pacific railroad transfer ferries were constructed after 1880, to serve the growing rail network along the riverfront. They remained in their original locations until they ceased operation during the twentieth century. Finally, a nuisance wharf was located at the foot of Robin Street during the late 1860s.

Military Structures

Historic military structures were present in two of the downriver floodwall segments. Fort St. Charles formed part of the lower river portion of the defensive wall surrounding the colonial city in the 1790's. Its earthen ramparts were removed early during the American period. A reserve defense line, constructed on the Montreuil Plantation in 1814 or 1815, formed a fall-back line for the American forces under General Jackson (Reeves and Reeves 1983:16). Since it never was used, it probably was leveled shortly after the withdrawal of the British invasion of force. Finally, the Touro Alms House, constructed between 1858 and 1862, was occupied by Federal troops from 1862 until 1865, at which time the building burned. Although not designed as a barracks, any resulting artifact assemblage should reflect military, rather than civilian, site use. No major structures were constructed subsequently on the block that contained the Alms House.

As Table 1 and the preceding discussion illustrate, historic land use along the New Orleans' riverfront was mixed; furthermore, the riverfront was a high activity area throughout its history. As a function of the economic and demographic growth of the port, the relative mixture and concentration of various types of structures in the project areas changed substantially over time. This inventory and classification of historic structures identifies the major components of land use in the four floodwall

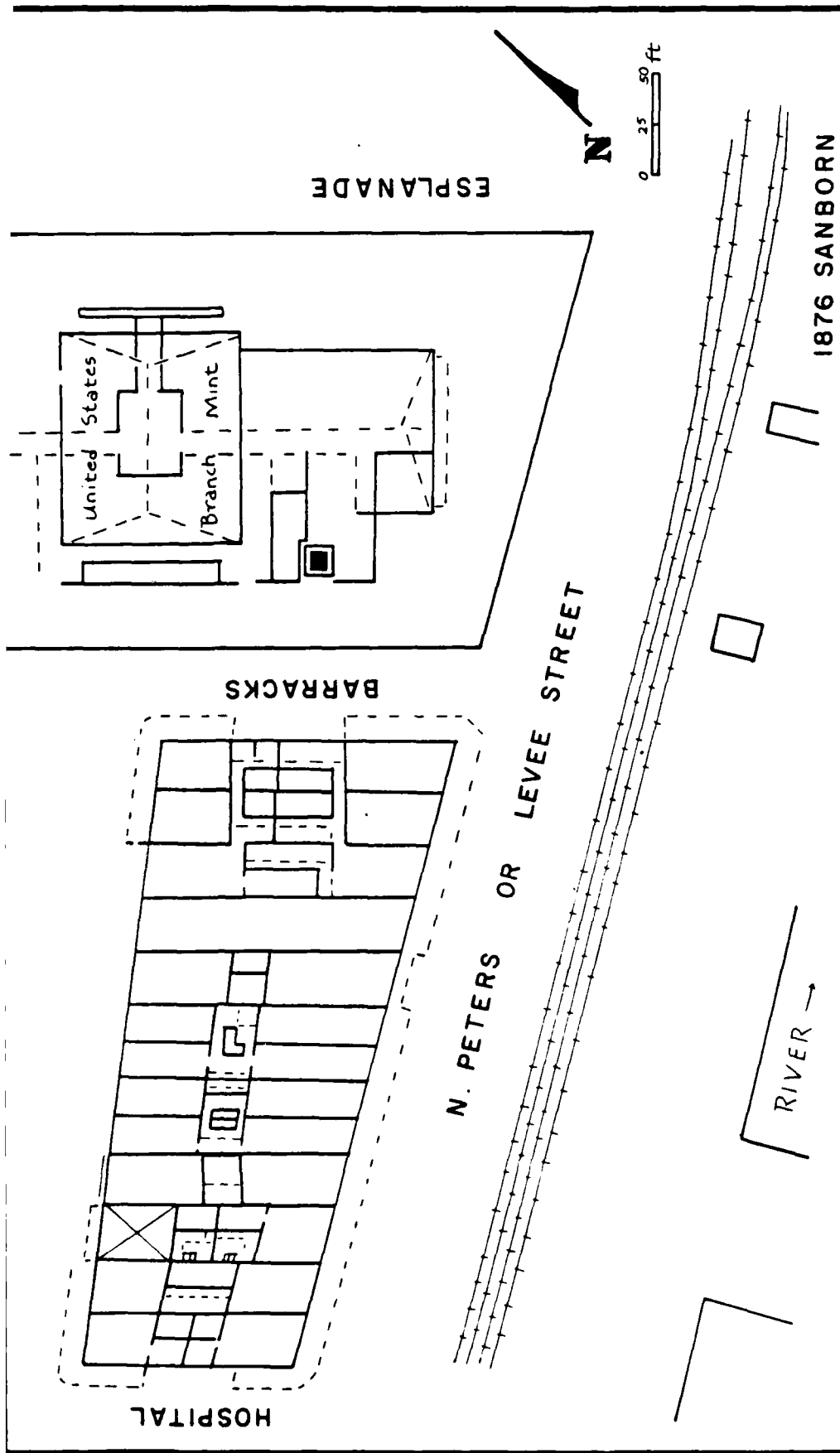


Figure 19. Redrawn Sanborn Fire Insurance Map of 1876, showing land use and standing structures between Hospital (now Governor Nicholls) Street and Esplanade Avenue (Barracks-Montegut Floodwall).

corridors. The following section of this report examines the issue of the significance of historic properties by reviewing these data thematically, or in terms of their historic associations with broad patterns of the regional history.

CHAPTER IV

A THEMATIC REVIEW OF THE SIGNIFICANCE OF HISTORIC STRUCTURES IN THE PORT OF NEW ORLEANS

Introduction

Throughout the previous sections of this report, the economic development of the Port of New Orleans, and the rise of the city as a commercial and industrial center, have been shown to have influenced patterns of land use along the waterfront and in all four floodwall alignments. The expansion of commerce and industry in the port city contributed to the growth of an urban upper class, a group distinct from the elite rural planters. It also created the need for a working class labor base, which encouraged immigration and population growth in the city. Additionally, major technological innovations contributed to the growth of the port and of city industry. The introduction of steam-powered river transport further accelerated the growth of the port. Steam technology in industry boosted the importance of the port as a processing center for raw materials from surrounding areas. Similarly, the introduction of railroad transportation provided another avenue for the transshipment of goods and products.

Such trends and processes contributed to the rise of New Orleans as the major commercial center in the South. These economic, technological and demographic themes related to the growth of the port provide a framework for the identification of potentially significant areas, blocks, and individual structures that may be impacted by the planned floodwall construction. The significance of examples of each of the categories of structures previously identified (Table 1) can be evaluated by the manner in which they reflect the major historic processes of change. The significant classes of structures are those which best illustrate these processes, as they were reflected in historic patterns of land use along the riverfront. A number of other classes or categories of structures in the four floodwall alignments lack direct association with the economic development of the port and its industries. Such structures generally comprise smaller mercantile establishments of types that were ubiquitous throughout the city. Together, these structures no doubt contributed economically and to the quality of life along the riverfront. Nevertheless, their individual relationships to the growth of the port were secondary, or indirect.

rocessing of cotton seed oil that are located in the floodwall corridors. The Louisiana Oil Mill was located in the center of the block between Clouet and Louisa Streets; it was in operation in 1876. The oil mill is an example of a post bellum cotton industry; as noted previously, cotton was one of Louisiana's two major cash crops. Structural remains associated with the oil mill, such as foundations for vats and storage facilities, and artifactual remains such as specialized oil containers, might be recovered in this area. This block has been recommended for monitoring because it contained the former distilleries mentioned above. The floodwall easement abuts the river edge of most of the block and traverses the riverside corner of the block's downriver end. That corner of the block contains the site of the Lawler Flour Mill.

Canneries

Another post bellum processing industry was canning. Two canning facilities were located in the floodwall zone. George W. Dunbar's seafood cannery was established in 1877, on the square between Desire and Elmira (now Gallier) Streets (Reeves and Reeves 1983:218). The proposed floodwall route runs through the middle of this block, and it is likely to encounter various structures associated with the canning industry. The Barataria Canning Company occupied the lower half of the square between Bartholomew and Mazant Streets (Figure 6). In 1899, the company constructed a one-story frame building there. The floodwall also will impact this building site. Similar assemblages are expected from both cannery sites. Artifactual remains that could be recovered from canning sites include cans, steam kettles, boilers, pumps, and shell fragments. Structural remains that may be encountered during floodwall construction include foundations for processing areas, engine houses, hydrants, and water storage tanks. Only one of these two cannery sites initially is recommended for monitoring. Dunbar's prestigious and larger cannery won a silver medal of merit at the 1878 Paris Exposition. Monitoring is recommended for this site, between Desire and Gallier Streets, because of its earlier date of establishment and its international recognition. Should this site fail to yield archeological data or should it lack contextual integrity, the cannery located between Bartholomew and Mazant Streets should be monitored.

Ice Factories

Ice factories were another late nineteenth century industry located along the New Orleans riverfront. Two of these were located within the floodwall zone. The Municipal Ice Manufacturing Company, between St. James and Market Streets (Figure 10), and Jacob Emmer's (later, Hercules) Ice Factory, between Pauline and Jeannet (now Alvar) Streets (Figure 5), appear equally important. Although these sites are expected to yield an artifact-poor site assemblage, structural remains that may be encountered during the floodwall construction include foundations for freezing and water tanks, refrigeration units, and other accouterments of the ice freezing complex. The Municipal Ice

Distilleries

Rum distilleries, or "guildives," were established in the floodwall alignment zones early in the nineteenth century. Locational data on the earliest ones are imprecise. Two distilleries dating from the 1820s, owned by Wm. Watson & Co. and by Commereaure and Feriet, both were located in the square between Clouet and Louisa Streets (Reeves and Reeves 1983:214). This square also was the site of the de Longuais' guildive, established by 1805. The floodwall impact zone follows the front edge of this former block, and then crosses the block's downriver corner. Monitoring is recommended in this square for several reasons. Because of the early dates of the distillery structures, their local and regional significance is enhanced. No early distilleries have been documented previously in South Louisiana (Smith *et al* 1983:254). Since archival information does not precisely identify the location of the distillery on this square, the only way to establish the condition and configuration is through archeological investigation. If a wall of a guildive is encountered during construction, the former location of the structure will become known. In addition, it may be possible to estimate the size of the structure if one or more walls are impacted by construction. The associated artifactual assemblage may include bottles and copper coils. Construction should be monitored between Clouet and Louisa Streets, in order to discern the nature and condition of the assemblages associated with early nineteenth century rum distilleries.

Mills

Several of the industries that emerged as a response to technological innovations are included in the floodwall zones. These are mills, canneries, and ice factories. These industries also reflected the growth of New Orleans as a processing center for raw goods. The floodwall impact zone abuts an example of a rice mill. The National Rice Milling Company was established in 1892, between Press and Montegut Streets (Figure 16). It replaced two warehouses that previously stood on the site. The floodwall will approach only the river edge of this block, and it will not impact the structure. Therefore, monitoring of this block during construction is not recommended.

The Lawler Flour Mill was located between Clouet and Louisa Streets (Reeves and Reeves 1983:214). It was a five-story concrete building erected sometime after 1877; however, the actual date of its construction is unknown. There are no extant examples of nineteenth century flour mills in New Orleans (Samuel Wilson, Jr., personal communication 1984). Archeological remains could help to date this structure. Archeological remains, processing equipment and the structural remains of storage areas, may be encountered during floodwall construction.

The Lawler Flour Mill was located at the downriver end of the same square that contained facilities for the extraction of cotton seed oil: the Louisiana Oil Company and the Louisiana Oil Mill. These two sites are the only examples of activities related to the

floodwall impact zone. The earliest known sawmill, the Miller and Pierce Sawmill, was operating by 1822. It was owned by J.F. Miller and located on the square between Piety and Desire Streets (Reeves and Reeves 1983:218). The sawmill operated until 1858, at which time the land became the site of the Touro Alms House. A second sawmill, established in 1828 by Martin Duralde, was located on the square between Congress and Independence Streets (Figure 17). By 1850, it was no longer in operation. The third sawmill included in the floodwall corridor was established in 1875. The owners converted a brick warehouse located between Alexander (now Kentucky) and Josephine (now Japonica) Streets into a sawmill (Figure 12). Maps indicated that the floodwall alignment will cross the interior of all three of these former blocks. Consequently, there is a high probability of direct impact at any or all of the sawmill sites. Although the likelihood of recovering associated material remains from sawmill sites is considered to be slight (Samuel Wilson, Jr., personal communication 1984), sawmills were a major industry related to the growth of both the city and the port. The three sawmill sites in the project area should contain similar assemblages. To avoid redundancy, one of these sites has been selected for monitoring. It is recommended that the Lambou and Noel Lumber Company site, between Alexander (now Kentucky) and Josephine (now Japonica) Streets, should be monitored because relatively precise locational data on structural improvements at this site are available. The types of remains that could be expected from this site include water tank foundations, a shed, and sawmill facilities. If no significant archeological or architectural assemblage is found at this site, the block between Piety and Desire Streets that later was the site of the Touro Alms House also is targeted for monitoring (Reeves and Reeves 1983:218). Therefore, the remains of the Miller and Pierce Sawmill located on this block may be recovered and documented.

Foundries

The New Orleans Foundry, founded by Pierre Soule in the 1830s, was located on the square between Montegut and Clouet Streets (Reeves and Reeves 1983:212). The floodwall impact zone traverses the front edge of this square. Accordingly, one wall of the foundry may be encountered. Since the impact corridor is not expected to impact the interior of this square, any significant remains there will not be disturbed. Smith *et al.* (1983:258) note that both light and heavy industrial sites are rare in ante bellum Louisiana. Because no inventories of specific items manufactured at the foundry are extant, and due to its early date, this site has the potential to provide valuable information concerning the early metal casting industry. Because of the potential scientific and historical significance of the Soule foundry, monitoring in its former location may provide information on the nature and the condition of the site, enabling documentation of what is preserved in place landward of the floodwall.

narrow wharves extending well out into the river, and were utilized for the disposal of garbage in the river (Reeves and Reeves 1983:102). Monitoring at that venue may yield data concerning the structure of this specialized wharf. Such an effort also may provide a data base for comparative studies of different wharf types, as well as information on late nineteenth century refuse disposal practices.

Recommendations for Railroad-Related Structures

Significant buildings associated with the rise of railroad activity along the riverfront, specifically railroad ferry depots, freight depots, and service buildings, date from 1880 and later. The majority of railroad-related structures were located in the upriver project area, with the exception of the Southern Pacific ferry depot. It was established before 1894, between Esplanade and Elysian Fields (Reeves and Reeves 1983:143). Available evidence indicates that the floodwall easement will not impact this structure. The Texas and Pacific Railroad ferry depot, located upriver just below the foot of Terpsichore Street, also lies outside of the impact zone. However, the Texas and Pacific Railroad freight depot was located between Terpsichore and Thalia Streets. It appears as a large frame structure on the 1895 Sanborn map (Figure 8). The floodwall construction zone will impact at least the upriver corner of this structure. However, because it is anticipated that archeological remains could provide little more locational information than already is available on historic maps, monitoring at these two sites is not recommended.

Railroad service buildings were constructed sixty feet above Terpsichore Street, adjacent to the rail lines. The floodwall will impact one known group of structures in the area located just above Terpsichore Street. These buildings included an oil house and several unidentified structures (Figure 18), that were constructed between 1880 and 1895. The buildings were small frame structures. Monitoring is not recommended for this area, because it is unlikely that information on anything besides spatial patterning in the railroad shipping industry would be recovered. Such data are readily available on historic maps.

Recommendations for Industrial-Related Structures

The floodwall corridors contained numerous structures that typified the growth of New Orleans as a commercial and industrial center. These included structures utilized for sawmills, foundries, and distilleries ("guildives").

Sawmills

Early in the nineteenth century, sawmills were established along the river, both above and below New Orleans. Most locational data on early sawmills are imprecise. However, three sawmills in the downriver segments, two ante bellum and one post bellum, can be located precisely. All lie within the downriver

zone there abuts but does not intrude into the square that formerly contained this press. In addition, as the noted architectural historian Samuel Wilson, Jr., has noted (personal communication 1984), a substantial number of cotton presses remain in the New Orleans landscape. Thus, the scientific benefit of examining the foundations of a demolished press would be questionable. These factors preclude the need for monitoring construction at the site of these cotton presses.

Shipwrights and Sail Lofts

Both the only documented shipwright and the only sail loft in the project area were located on the square between Marigny and Mandeville Streets (Reeves and Reeves 1983:207). The floodwall will pass directly through the square that contained these structures. As the only known examples of specialized maritime industries in the impact zone, and because of their direct and special relationship with the growth of the Port of New Orleans, these properties should be considered significant. Construction between Marigny and Mandeville Streets, then, should be monitored carefully in order to discern the nature and condition of the assemblage from the shipwright and sail loft facilities.

Wharves and Docks

The construction and distribution of wharves and docks also reflected the growth of the Port of New Orleans. Docks and wharves lined the river throughout the project area. Historic wharf structures between Market and Thalia Streets will be impacted by the planned construction. However, the terrestrial portions of these wharf sites are not expected to contain substantial artifactual assemblages. In addition, little variation is expected in the assemblages from the various wharf sites. Little or no structural remains of the wharves are expected to have survived to the present. The usage and design of such late nineteenth century wharves are well documented historically. Monitoring during floodwall construction probably would yield very little additional information, and these archeological expectations do not seem to justify the expenditure required to monitor these structures.

Wharves that were utilized for specialized functions, however, require greater scrutiny. An unusual wharf is indicated at the foot of Thalia Street on an 1857 D'Hemecourt map (Reeves and Reeves 1983:Figure 6). It has a distinctive appearance, and it may reflect specialized usage. The function of this wharf is unknown; its form suggests that it may have been a boat slip. Monitoring during construction is recommended at this site, to ascertain whether cultural remains associated with the wharf can provide information concerning the use, extent, and chronology of this unique wharf.

A nuisance wharf was located at the foot of Robin Street by 1870 (Reeves and Reeves 1983:116). Nuisance wharves were long

this time using standard archeological techniques. Rather, the nature of archeological contexts and the effect of post depositional and site destruction processes on those contexts will remain unknown until construction begins. The guiding principle in the delineation of sensitive blocks and/or structures that will be impacted by the planned construction is that a direct association with an identified broad pattern or theme in the regional history, coupled with the potential to yield viable historic archeological data, both confers significance to the structure in question and engenders the need for mitigation of adverse effects (36 CFR 800.5).

A further word on the nature of the planned floodwall projects should clarify the issue of construction impacts. As noted in Chapter I of this report, the four floodwall alignments will traverse an area 3.11 miles (5.02 km) long. A total of forty-two city blocks are contained in the four floodwall segments. The floodwall construction easement averages twenty-five feet (7.5 m) wide in the upriver Jackson to Thalia alignment. In the downriver segments, easement width varies between twenty and sixty-four feet (6.1 - 18.3 m); for most of the planned downriver floodwall corridors, easement width averages forty feet (12.2 m). Within these easements, narrow construction trenches that will not exceed several meters in width will be excavated. Therefore, zones of direct construction impact will constitute very narrow linear trenches that generally parallel the Mississippi River and the NOPBR system's railroad tracks. Archival and map research indicate that thirteen historic blocks in the various floodwall segments contain structures of potential historic archeological significance that will be impacted directly by floodwall construction (Table 6).

Recommendations for Shipping-Related Structures

The growth of the Port of New Orleans was reflected in numerous structures that were functionally oriented toward the shipping industry. Such structures in the floodwall impact corridors included cotton presses, a shipwright, a sail loft, shipping wharves, and docks.

Cotton Presses

The planned floodwall alignments traverse squares that historically contained cotton presses. The most significant of these was the Levee Steam Cotton Press, which was located on two squares between St. Ferdinand and Montegut Streets (Figure 16). This was the only press located downriver from New Orleans prior to the War Between the States, and it was a significant landscape feature from 1832 until 1882. However, available map and archival evidence indicate that the floodwall construction will not impact the foundations of this press, which was set back farther from the river than the planned floodwall. The Pelican Cotton Press was located between St. Andrew and St. Mary Streets, in the Jackson to Thalia floodwall segment (Figure 13). The planned construction

CHAPTER V
IMPACT ASSESSMENT AND RATIONALE FOR STRUCTURES
HAVING POTENTIAL FOR NATIONAL REGISTER ELIGIBILITY

Introduction

Using the foregoing thematic review of historic land use in the four planned floodwall alignments, along with the inventories and classification of historic structures that were presented previously, the issue of the potential National Register eligibility of individual properties now may be addressed. The objective of this effort is the delineation of historic properties that may contain archeological or architectural components that have the potential for National Register eligibility. Specific criteria for National Register eligibility that are applicable to the riverfront structures in question include association with events that have made a significant contribution to the broad patterns of our history, or association with the lives of persons significant in our past (36 CFR 60.6). In addition, these structures should have the potential to yield information important in history (36 CFR 60.6). Finally, archeological or architectural sites and remains must possess "integrity of location, design, setting, materials, workmanship, and feeling..." (36 CFR 60.6).

Chapter IV outlined the categories and types of sites and structures within the proposed floodwall corridors which illustrate economic, technological, and demographic trends that contributed to the commercial and industrial expansion of the Port of New Orleans. Such structures are demonstrably associated with broad patterns of regional and national history. The following discussion identifies specific localities of each category of potentially significant sites within the proposed floodwall alignments that provide the best potential to yield archeological remains. Such sites have the potential to contribute materially to knowledge of history, fulfilling the second requisite significance criterion. Recommendations for the archeological treatment of potentially significant historic structures then are represented.

Nature of Project Impacts

As noted previously, the scope of work for this project and the memorandum of agreement specify that data recovery or monitoring within the four floodwall alignments will be executed during construction. Therefore, floodwall realignment for the avoidance of historic sites is not a feasible mitigation alternative for potentially significant sites. Furthermore, this entire study is based on archival and historic map research, and no field archeological reconnaissance or testing for documentation for determination of National Register eligibility has been undertaken. Thus, the integrity of individual sites as defined in the National Register criteria cannot be measured at

sites are more closely related to the development of the area than are other classes of businesses.

Military-Related Structures

Two military structures built for the defense of the city were located within the proposed floodwall alignment corridor. Fort St. Charles was erected in the late eighteenth century for the purpose of defending the Vieux Carre. The Montreuil Line was an earthwork erected to defend the city against the British during the War of 1812. Both of these military structures reflect early recognition of the economic and strategic importance of New Orleans.

Summary

As the above discussion illustrates, a variety of historic structures can be considered significant based on their relationship to the growth and development of New Orleans as a major port. Structures directly related to port activity and growth are potentially significant; these include shipping wharves, docks, warehouses, cotton presses, shipwrights, and sail lofts. Railroad structures that are potentially significant include freight depots, service buildings, and ferry depots. Numerous historic structures relate to commercial and industrial expansion along the riverfront. Flour and rice mills, cotton seed oil mills, distilleries, seafood canneries, sawmills, foundries, and ice factories were particularly important. All of these also reflect technological change over time. Changing demographic patterns are reflected in the types of residential structures located in the four floodwall project areas. Significant among these are plantation structures, tenement houses, and suburban estates. Similarly, breweries are indicators of demographic processes. Military structures that are considered potentially significant include Fort St. Charles and the Montreuil defense line. The Touro Alms House is significant because of its association both with the War Between the States and with the prominent New Orleans philanthropist Judah Touro.

Residential-Related Structures

During the eighteenth and early nineteenth centuries, plantations were located both up and down the river from the Vieux Carre. These gradually were replaced by industry, business, and by residences. Such plantations reflect early land use within the project area. Just as the plantation lands upriver from the Vieux Carre were subdivided for industrial, commercial, and residential use, the area downriver from the Vieux Carre eventually was divided for suburban estates. While the expansion of industry and commerce in New Orleans created opportunities for the working class, it also produced an urban upper class which was distinct from the rural plantocracy that predominated elsewhere in the state. The suburban estates, then, illustrate one aspect of the settlement pattern that resulted from expanding industry and commerce.

Public and Service Facility-Related Structures

Public facilities and social institutions also were established to serve the needs of the growing population. Saloons, coffeehouses, gambling houses, and social halls provided the residents of New Orleans with places for meetings and entertainment. Another example of an "entertainment" area along the proposed floodwall alignment was a cockfighting pit (Figure 9). Again, these facilities represent categories of structures present in most areas and neighborhoods in New Orleans.

Other public and service facilities located along the floodwall alignment included nuisance wharves, passenger ferry depots, schools, markets, stables, and firehouses. The first two of these categories are demonstrably and directly related to the growth of the port. However, archeological manifestations of such sites probably are minimal. Schools, markets, stables, and firehouses were common throughout the city. Thus, it is unlikely that the sites of these structures will make a significant contribution to our knowledge of riverfront development.

A unique public institution in the city of New Orleans was the Touro Alms House. This facility was endowed by the philanthropist Judah Touro, out of concern for the welfare of the urban poor. The institution never functioned as an alms house, however, and its only use was as barracks for Federal troops during the occupation of New Orleans. This site, then, also was associated with the War Between the States.

Brewery-Related Structures

As noted previously, a number of breweries were located along the proposed floodwall alignment. These primarily were owned and operated by Germans, and they are associated with German immigration into the city. Because this industry reflects the nineteenth century demographic patterns of New Orleans, these

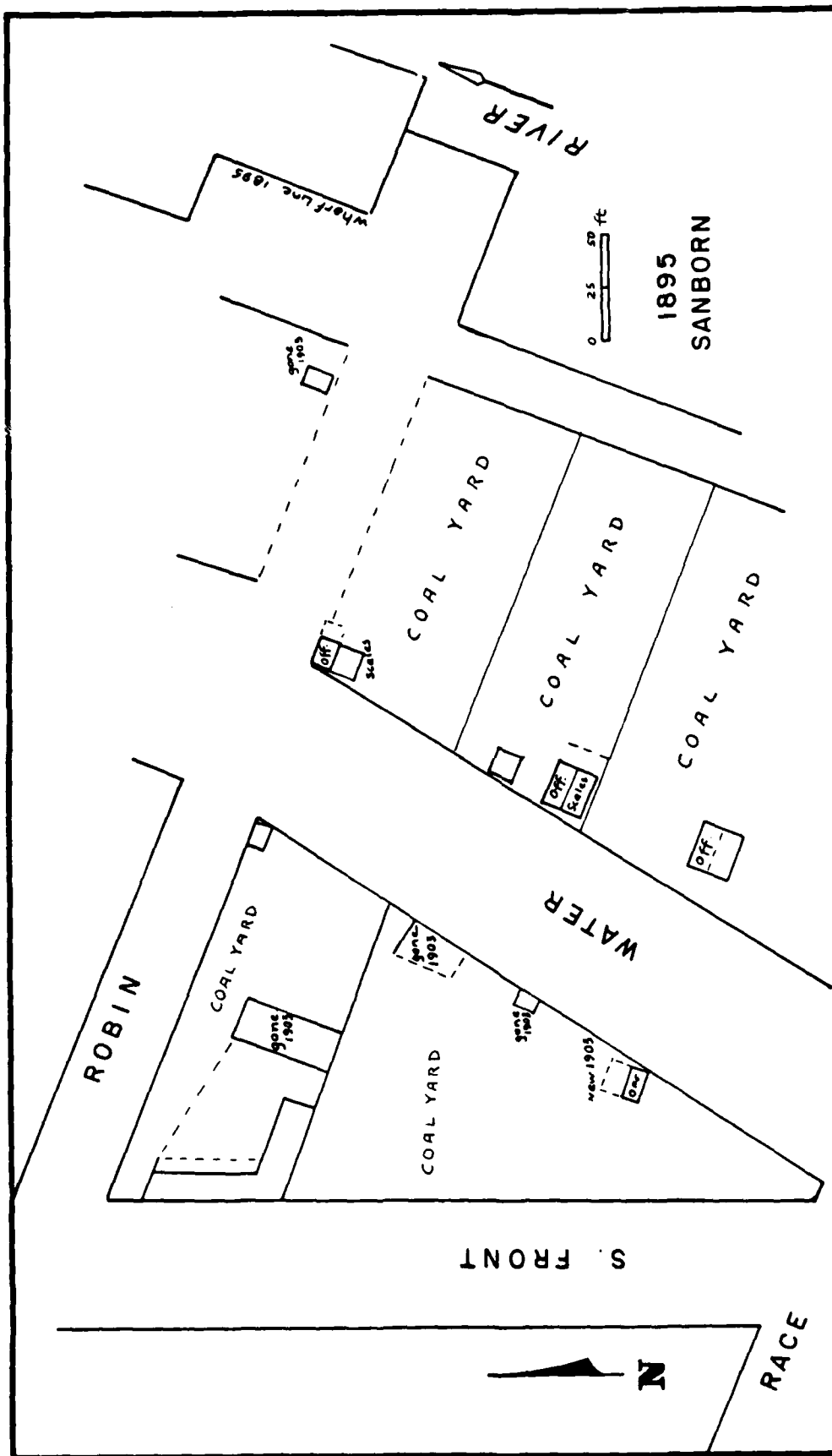


Figure 22. Redrawn Sanborn Fire Insurance Map of 1895, showing standing structures formerly located between Race and Robin Streets (Jackson-Thalia Floodwall).

the Civil War. Although no documentary evidence of what was manufactured at the foundry has been provided (Reeves and Reeves 1983), map evidence suggests that it was a fairly small operation. Nevertheless, such a site is a rare early example of ante bellum industrialism (Smith et al. 1983).

A number of other commercial and industrial facilities played a lesser and indirect role in the development of the port. Ice factories manufactured products for local use. Since ice had to be shipped to New Orleans from northern states prior to the late nineteenth century, the development of ice manufacturing technology was a significant advance that reflects the increasing self-sufficiency of the city.

A variety of small factories were established during the late nineteenth century that produced goods for local consumption. A cistern factory, a tobacco factory, a sausage factory, a jute factory, and an excavating and fertilizer manufacturing company, all were located in the various floodwall alignments (Tables 2 - 5). Late nineteenth and early twentieth century commercial shops located within the proposed floodwall alignment that provided goods and services for the local population included bakeries, blacksmiths, cabinet makers, carpenters, drugstores, groceries, and an oyster dealer. Such establishments were common in nineteenth century New Orleans, so these sites are not unique.

Storage facilities related to industrialism in New Orleans also formerly were located along the floodwall alignment. These included coalyards and lumberyards, both of which consisted of open storage areas, minor offices, and outbuildings (Figures 10,11,15,22). Since little in the way of material remains would be recovered from such sites, it is unlikely that their archeological documentation would make a significant contribution to knowledge.

Demographic Trends Related to Growth of Port

A large labor base was necessary to support the expanding commercial and industrial activities of New Orleans. This became especially critical during the post bellum period, when slave labor was no longer available. Immigration into New Orleans helped to meet this need. Tenement or rental housing was built, primarily in the vicinity of the upriver end of the floodwall alignment, in close proximity to major industrial and shipping facilities (Figures 3,4). Tenement housing reflects the demographic patterns that resulted from expanding industry and commercialism, from nineteenth century immigration to New Orleans, and from changing land use along the river.

Service buildings for the maintenance of trains also were located along the rail lines. Both freight depots and railroad service buildings have the potential to provide information on the development of railroad commerce, on the spatial patterning of the rail shipment industry, and on the industry of railroad maintenance. Other historic railroad structures and use areas within the vicinity of the planned floodwall included railroad ferry depots, railroad passenger depots, and railyards. Ferry depots served as transfer points for rail-shipped goods travelling across the river prior to the erection of railroad bridges in the twentieth century. A railroad ferry depot formerly located in the Jackson to Thalia floodwall corridor, and another in the Barracks to Montegut segment, are on the river side of the planned floodwall construction. Since the organization of railyards may be documented utilizing available historic map data, and since passenger platforms generally were flimsy structures, neither of these categories of archeological sites in the project area is expected to contain a significant material record of the past.

Commercial and industrial expansion accompanied and encouraged the growth of shipping in New Orleans. Originally, the city served as a point of transfer of raw goods. Later, industries developed for processing raw materials shipped through the port. Thus, shipping and industry interacted to their mutual economic advantage. Industrial sites can illustrate economic and technological processes contributing to commercial growth, and to the economic self-sufficiency of New Orleans.

Industry-Related Structures

A wide variety of former mill sites are located within the four floodwall project alignments. Flour mills and rice mills were the most important grain mills. The existence of flour mills in New Orleans is particularly interesting, since wheat was never grown in this area. Rather, it was shipped down the Mississippi River from the Midwest. Rice became an important crop in southern Louisiana during the Reconstruction Period, due to the lack of available capital for rebuilding the sugar industry. Rice mills in New Orleans also reflect the centralization of staple crop processing after the War Between the States. Other industries formerly within the project area that processed locally available resources include cotton seed oil mills, distilleries, seafood canneries, and sawmills. The first two of these refining industries reflect the importance of Louisiana's major cash crops, cotton and sugar. The canning of seafood enabled the expansion of southern Louisiana's fishing industry beyond local distribution. Finally, lumber milling was one of the area's largest industries during the later nineteenth century. It provided lumber both for construction resulting from the expansion of the city and for the ship building industry.

A foundry was established during the 1830s within the Montegut to Independence floodwall corridor. It operated through

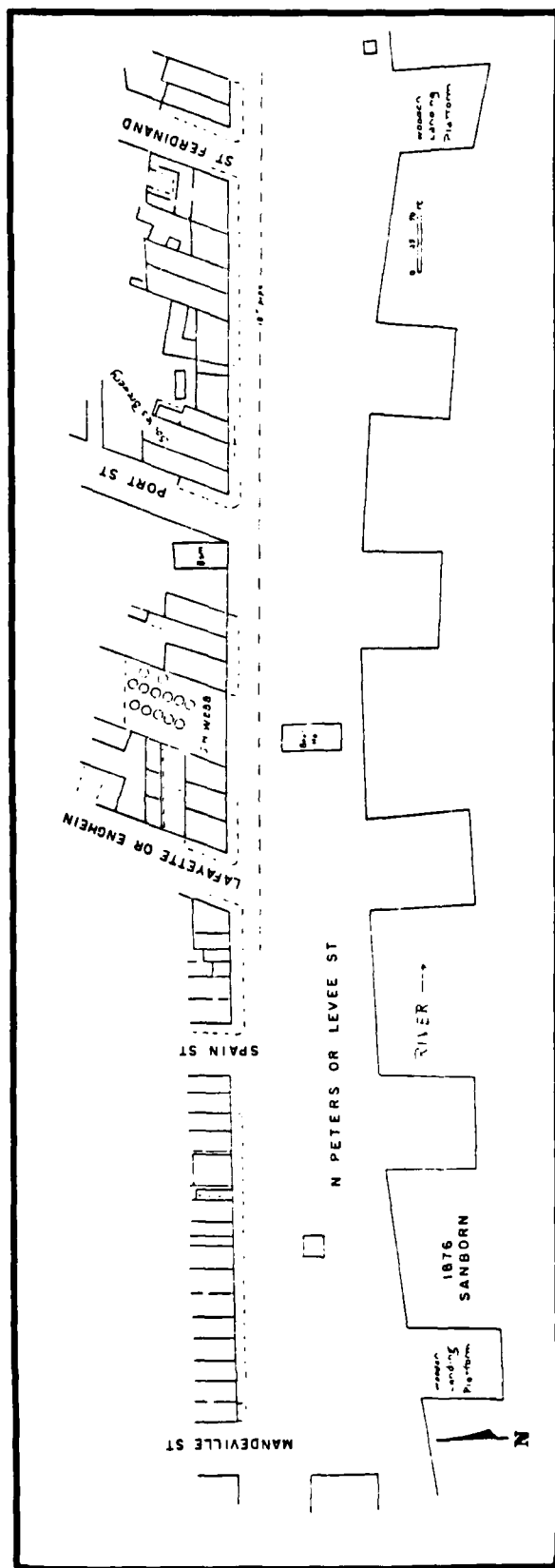


Figure 21. Redrawn Sanborn Fire Insurance Map of 1876, showing standing structures formerly located between Mandeville Street and St. Ferdinand Street.

Economic and Technological Trends Related to Commercial and Industrial Growth of Port

Shipping-Related Structures

As noted above, the growth of riverfront New Orleans throughout its history in large part has been a function of continued growth and change in the infrastructure and functions of the port. Former structures associated with shipping activities, or that housed shipping-related industry, reflect the development of riverborne commerce. Shipping wharves and docks that lined the river, especially along the upriver Jackson to Thalia project corridors, illustrate the city's commercial focus on the river. Such wharves served as the transfer points for the shipping and receiving of goods. Warehouses for the storage of goods awaiting transfer were closely related to the wharves, both spatially and functionally. A special category of warehouse was the cotton press, which often had its own shipping wharf. Cotton presses performed the additional function of compressing cotton for economical storage and shipment. Structures for the building and maintenance of ships also were necessary in an active and growing port. A shipwright and a sail loft (for the manufacture and repair of sails) both formerly were located within the Barracks to Montegut segment of the proposed floodwall alignment. Additionally, the remains of a boathouse there may be impacted by floodwall construction (Figure 21). However, little documentation is available on this structure, and it is unclear if it was related directly to the shipping industry. Wharves, docks, warehouses, cotton presses, shipwrights, and sail lofts, all provide tangible evidence of the commercial and industrial development of the Port of New Orleans. Such sites potentially can contribute information on port activities, on shipping-related industry, on the expansion of river commerce, and on the spatial organization of the riverfront.

Railroad-Related Structures

Just as the introduction of steam technology accelerated the growth of the port, railroads expanded the economic potential of New Orleans as an urban center. Although railroads were introduced early in the nineteenth century, rail transport became an important factor in the shipping and receiving of goods during the post bellum period. The expansion of the railroads had a dramatic effect on land use patterns along the riverfront. Much of the area was lined by tracks by the late nineteenth century. The rail transport corridor paralleled and was immediately adjacent to riverfront commerce. The location of railroads along the riverfront provided easy access to the warehouses. In addition, freight depots specifically designed for railroad use were constructed. The function of these depots is analogous to the function of wharves in river commerce.

Manufacturing Company plant was erected in 1891 (Reeves and Reeves 1983:157). This site slightly predates Jacob Emmer's ice plant, opened ca. 1894 (Reeves and Reeves 1983:225). The Municipal Ice Company plant will be impacted more directly by construction of the floodwall. Therefore, the square between St. James and Market Streets is recommended for monitoring. None of the documentary sources dealing with the local ice business indicate that the city's earlier commercial ice houses for the storage of natural ice were located in the proposed floodwall alignment (Reeves and Reeves 1983:154-156). No remains of natural ice storage structures are likely to be encountered during the present project. The artifactual assemblage associated with the storage or retail sale of natural ice probably would be difficult to distinguish from the specialized tool assemblage present at nineteenth century ice manufacturing plants.

Recommendations for Residential-Related Structures

Plantations

As noted previously, the project areas contained different types of residential structures that reflected the demographic and economic growth of the city. One residential structure dating from the late colonial period was located on the square between Louisa and Piety Streets (Reeves and Reeves 1983:214). This site contained the home of Louis Brognier de Clouet at the turn of the nineteenth century. The house later was utilized as a gambling establishment and, in 1831, as a school. Because of the rarity of plantation remains during the colonial period (Smith *et al.* 1983:242), monitoring is recommended for the square between Louisa and Piety Streets. Lack of precise locational data makes it difficult to determine if the structure will be impacted directly. The riverside half of this square will be impacted, however, and it may have contained formal gardens, if not the house itself. Structural remains may include the remains of garden paths and/or foundations from the house or other improvements, such as garconniers or pigeonnaires. In addition, domestic artifacts such as ceramics, glass, and cutlery shall be recovered.

Tenements

The two basic types of housing that reflected immigration and population growth in nineteenth century New Orleans were tenement houses and suburban estates. Reeves and Reeves (1983:198) identify a row of tenement houses on Square 1 between Josephine and Adele Streets, in the upriver project area. These tenements appear to date from the 1850s. Because ante bellum tenements and townhouses are common and well documented, particularly in New Orleans (Smith *et al.* 1983:260-261), it is not believed that any new or unusual information will be provided by archeological monitoring during construction for the block between Josephine and Adele Streets.

Suburban Estates

The Montegut to Independence and Independence to the Industrial Canal floodwall segments contained several large suburban estates. Three such houses formerly were located within the floodwall impact zones. These were the "Sporl house," constructed ca. 1820 between Clouet and Louisa Streets (Reeves and Reeves 1983:214); the Piernas house, built in 1827 between Mazant and France Streets (Reeves and Reeves 1983:224); and, the Francois Gardere house, constructed ca. 1830 between Lesseps and Poland Streets (Reeves and Reeves 1983:231). Because ante bellum suburban estate homes were common in the New Orleans area (Samuel Wilson, Jr., personal communication 1984), and because one such example, the Rodriguez house, recently has been tested archeologically at the Chalmette Unit, Jean Lafitte National Historical Park (Goodwin and Yakubik 1983, Yakubik 1983), none of these suburban homes are expected to yield new information on the nature, condition, and range of variability of artifactual assemblages from this class of historic sites. Therefore, no suburban estate sites are recommended for monitoring.

Recommendations for Public and Service Facility-Related Structures

No structures that functioned primarily as public or service facilities are included among the potentially significant properties recommended for monitoring. Several of these buildings nonetheless were designed as or served as public facilities, though treated under other categories in the present study. The De Clouet House was the site of the Frascati, a gambling house, and of a school during the early 1800s; that building is dealt with as a residential structure. The Touro Alms House was planned as a residence for the indigent, the only documented charitable institution in the floodwall alignment. The building served exclusively as a military barracks before its destruction, and therefore is dealt with among the military structures. The Washington Girls School and the Washington Market building represent other categories of public structures. However, the remains of these structures would not constitute unique examples of their type and are not considered archeologically significant.

Recommendations for Brewery-Related Structures

Industrial structures associated with the post bellum immigration of Germans were the breweries. Pelican Brewery was established between 1877 and 1890 on the former site of the Louisiana Oil Company, between Clouet and Louisa Streets (Reeves and Reeves 1983:214). The floodwall impact zone does not enter this square deeply enough to encounter material remains. A second brewery, Home Brewing Company, was cited as owning land on the lower end of the square between Pauline and Jeannet (now Alvar) Streets, from 1892 to 1894 (Reeves and Reeves 1983:225). There is no additional archival or map information concerning the buildings or production of this company, although Emmer's Ice House was

located on the site ca. 1894. Artifact and structural assemblages from these two brewery sites should be similar. Therefore, it is recommended that only one of the sites be monitored. Because monitoring previously has been recommended for the block located between Clouet and Louisa Streets, and because the best archival evidence is available for the Pelican Brewery, this facility is selected for monitoring. Artifactual remains such as bottles and bottle closures, and structural remains of foundations, water storage, pumps, and pipes should be encountered during floodwall construction. If this site fails to yield archeological data, or should it lack contextual integrity, the Home Brewing Company site located between Pauline and Alvar Streets should be monitored during floodwall construction.

Recommendations for Military-Related Structures

Several historic sites within the project areas are significant for their association with the military history of New Orleans. Fort St. Charles dates from 1792. It was erected on the Commons below the Vieux Carre, at the foot of present day Esplanade Avenue. Map evidence (Reeves and Reeves 1983:33; Figure 19) indicates a possibility that a corner of the fort may be encountered during floodwall construction. Samuel Wilson, Jr., (personal communication 1984) believes that any material remains of the fort probably are seriously disturbed. Because of this, and due to the limited impact of floodwall construction on the fort, significant archeological data may not be recovered there. However, monitoring is recommended for the blocks between Barracks Street and Elysian Fields in order to recover any locational data on the fort which might be provided by associated remains. Since Fort St. Charles has not been archeologically recorded, any such information recovered during the present project will be significant.

The land between Elmira (now Gallier) and Congress Streets was the site of an early nineteenth century defensive line (Figure 17; Reeves and Reeves 1983:16). It was constructed by Andrew Jackson as the third line of defense for the Battle of New Orleans, in 1815. The site, located on the former plantation property of Montreuil, is significant for its historic associations. Archeological data from this site will provide information on construction of defensive embankments. Such data may be compared to those from Battery Number 3 of Jackson's defensive line at the Battle of New Orleans (Ted Birkedal, personal communication 1984). Therefore, this square should be monitored during floodwall construction.

The Touro Alms House, which occupied most of the block located between Piety and Desire Streets (Reeves and Reeves 1983:218), is significant for its association with Judah Touro, a prominent person in New Orleans history, who bequeathed the money for the construction of the Alms House. Although the building was intended for use by the city's poor, it never was utilized for this purpose. Instead, the unfinished structure served as a barracks

for Federal troops during the War Between the States. The period of Federal occupation of the site is well-documented. The site has the potential to yield artifactual material from the Federal occupation of the site, such as ammunition, military buttons and decorations, and a full range of domestic artifacts such as ceramics and glass. If the site has not been disturbed, evidence of the burning of the structure should be observed. Construction of this block, then, should be monitored carefully.

CHAPTER VI MONITORING PLAN

Introduction

Archeological monitoring of construction projects is intended to prevent the destruction or disturbance of archeologically significant remains. Through the use of trained archeologists on-site during the initial stages of pre-construction excavation, significant remains can be identified when first encountered in situ. The field monitor is to report such remains to the Contracting Officer's Representative or to the Technical Representative, who are authorized to issue stop work orders in order to protect important cultural resources. Monitoring is thus a form of cultural resources management in which determinations of archeological significance must be made in the field. Archeological monitoring of construction of the four floodwall alignments is not intended to act as a project delaying process; rather, it is designed to provide rapid and effective management of cultural resources.

The need to determine site significance during field monitoring requires the investigator to formulate predictions of archeological remains to be encountered at each locale that will be impacted. Along the New Orleans waterfront, where a multitude of historic components are present in a high activity urban port setting, it has been necessary to determine prior to the advent of construction which historic structures will possess significance (36 CFR 60.6) if their remains have integrity, or sufficient archeological context to confer research potential (36 CFR 60.6). In this case, then, the foregoing historical and typological evaluations of archeological significance serve as a framework for monitoring.

Documentary research already has indicated that the structures delineated in Table 6 were associated with events or individuals important in the history of the region; any remains associated with these structures that retain archeological research potential are therefore significant. The documented cultural resources in the floodwall alignment have been evaluated in terms of their possible contribution to our understanding of the development of New Orleans, emphasizing those types of structures which have not been recorded archeologically in the city. Only those city blocks in the floodwall alignment which contain those historically significant structures have been selected for archeological monitoring under the present plan. It is possible that archeologically significant remains will be found among the blocks which have not been recommended for monitoring. Criteria for the report of such archeological remains to the monitoring archeologist are presented below. The possibility of unexpected discoveries nonetheless does not justify the presence in the field of an archeological observer at all work areas.

TABLE 6. POTENTIALLY SIGNIFICANT PROPERTIES RECOMMENDED FOR MONITORING

<u>Category/Structure</u>	<u>Location</u>	<u>Floodwall Alignment</u>	<u>Additional Components on Blocks</u>
<u>Residential/Public</u>			
De Clouet House (later Frascati Gambling House)	Louisa-Piety	Montegut-Independence	Small houses Jung & Sons Coalyard Jefferson Lyceum Washington Girls School Washington Market House
<u>Commercial</u>			
Municipal Ice Mfg. Co.	St. James-Market	Jackson-Thalia	
Shipwright	Marigny-Mandeville	Barracks-Montegut	Row houses with stores Washington Hall
Sail loft	Marigny-Mandeville	Barracks-Montegut	Row houses with stores Washington Hall
<u>Industrial</u>			
New Orleans (Soules) Foundry	Montegut-Clouet	Montegut-Independence	Szymanski (Atlantic) Cotton Press
Rum Distilleries (guildives)	Clouet-Louisa	Montegut-Independence	La. Oil Mill La. Oil Co. Pelican Brewery Lawler Flour Mill

TABLE 6. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Floodwall Alignment</u>	<u>Additional Components on Blocks</u>
Miller and Pierce Sawmill	Piety-Desire	Montegut-Independence	Touro Alms House
Dunbar's Seafood Cannery	Desire-Elmira (now Gallier)	Montegut-Independence	
Home Brewing Co.	Pauline-Jeannet (now Alvar)	Independence-IHNC	houses Jacob Emmer's (Hercules) Ice House F. Keff Cistern Factory Sausage Factory
Barataria Canning Company	Bartholomew-Mazant	Independence-IHNC	
Lambou & Noel Lumber Co. (Sawmill)	Alexander (now Kentucky) Josephine (now Japonica)	Independence-IHNC	blacksmith carpenter's shop New Orleans Tobacco Warehouse Co.
<u>Military</u>			
Touro Alms House	Piety-Desire	Montegut-Independence	Miller & Pierce Sawmill
Montreuil (Jackson) Defense Line	Elmira (now Gallier)- Congress	Montegut-Independence	small houses
Fort St. Charles	Barracks-Elysian Fields	Barracks-Montegut	Dubreuil (Marigny) Canal Southern Pacific Railroad transfer ferry depot

TABLE 6. Continued.

<u>Category/Structure</u>	<u>Location</u>	<u>Floodwall Alignment</u>	<u>Additional Components on Blocks</u>
<u>Wharves</u>			
nuisance wharf	foot of Robin	Jackson-Thalia	
unusual wharf	foot of Thalia	Jackson-Thalia	

The significant archeological components encountered within the monitored blocks of the floodwall alignment will include artifacts and features associated with documented structures. The present monitoring plan is based on the expectation of finding some of those remains; therefore the fieldwork recommendations include explicit statements of the materials which may be recovered at the significant locales. Such historically significant structures or features constitute the critical components to be identified and treated during fieldwork. Assemblages which are diagnostic of documented structures and activity areas, whether significant or not, are identified below (Appendices 3-6). Prediction of the characteristic classes of material or types of artifacts which are associated with various loci enables monitoring personnel to recognize items indicative of specific assemblages. Without such predictions, remains indicative of potentially significant archeological sites might be overlooked in the miscellany of components frequently present in urban commercial and industrial settings. In addition to this probative reconstruction of components in monitored blocks, the probable stratification of components within these areas also is reviewed here. Procedures for the treatment archeological components during monitoring of the floodwall alignments are outlined in the procedural guidelines below. Each of the four floodwall segments is treated in detail in a separate appendix (3-6).

Procedural Guideline

Monitoring procedures in the floodwall alignment are based primarily on the prior archival determination of the historic significance of documented structures. Monitoring of designated blocks in the floodwall impact zone, therefore, is intended to ascertain the archeological integrity and associations of remains encountered. The guidelines for recordation procedures for significant or potentially significant sites presented in Appendix 1. The general procedure to be followed in monitoring follows the following sequential steps:

- 1) The field crew conducting the archeological monitoring will have on site maps and plans indicating the approximate location both of historically significant structures and of other structures in the given block. The crew will have block-by-block lists of the significant structures, their dates and functions, as well as a list of other components in the same blocks. Remains of these various structures may be encountered during mechanical excavation of the inspection trench. Upon observation of structural and associated remains, their location will be recorded within the impact zone and in relation to the city street grid. Visual reconnaissance of

the inspection trench, and of the backdirt from it, will be conducted by the field crew.

- 2) The character and historic association of remains encountered then will be identified by the monitoring personnel. A list of potentially diagnostic artifacts and features will be provided for the specific historically significant structures which may be encountered. Where more than one documented structure or activity was located within a single block, the various components which may be recovered archeologically will be listed for that block to minimize difficulties in recognition of the material.
- 3) The monitoring field crew will determine the extent and stratigraphy of significant in situ deposits. Features will be plotted horizontally and vertically. The spatial relationship of features to historic structures will be noted. A determination of the necessity or effectiveness of extending the excavation area in order to determine the archeological significance of remains then will be made. Potentially significant archeological remains already have been identified archivally. Limited extension of the excavation areas will be undertaken judiciously and only when necessary to ascertain the nature and condition of remains, as well as to determine their extent when insufficient data are recovered from the excavation trench. The contractor may employ mechanical excavation equipment in deepening portions of the inspection trench or extending the excavation area outwards from the wall of the trench. The field monitoring crew also will examine any adjacent excavations within the floodwall right-of-way for archeological or stratigraphic data. This stage of the monitoring procedure thus is concerned with determination of the nature and integrity of material recovered; determination of significance in the field will be based primarily on these factors.
- 4) The monitoring crew will evaluate the significance of remains encountered in the inspection trench or adjacent excavation areas within the project right-of-way. The location and identity, and if possible the extent, of these remains will be summarized. In those areas of monitored blocks where no archeologically significant material was discovered, no further work is warranted beyond the initial monitoring stage. Where material which possesses significant archeological

research potential is present, an estimation of possible impacts on these significant remains by the present floodwall project will be prepared by the field monitor. The remains of all historically identified structures recovered in a given block will be listed, and their relative stratigraphic positions noted. Where no remains associated with specific historically significant structures are encountered, the possible causes for the failure to recover such material (e.g., distance of structure from inspection trench, site destruction processes) will be noted by the field archeologist. Other factors affecting the area will be noted. If no archeologically significant remains are recovered in one of the monitored blocks, either in the inspection trench or in adjacent construction excavations within the project right-of-way, no further work is warranted in that block.

These procedural steps allow the field archeologist to locate structures or features spatially, to identify associations of remains with documented locales, to determine the stratigraphy and extent of remains, and to evaluate the material recovered. This methodology provides a framework by which data can be recorded consistently, efficiently, and in a format which presents the critical information for site evaluation.

Mitigation Procedures

The archeological field crew conducting the monitoring operations shall report any finds of major significance to the Contracting Officer's Representative or to the Technical Representative. These persons are empowered to issue temporary stop-work orders to the construction crew in order to protect significant cultural resources from adverse impacts. The excavation of the inspection trench, or of adjacent trenches, can be halted temporarily at a specific location to allow the field archeologist to determine the possible significance of material before it is disturbed. Should archeological remains of outstanding significance be encountered, construction excavation at a given locale can be halted until, in consultation with the Contracting Officer's Representative, appropriate mitigation measures can be taken. Where structural foundations or associated remains are located behind (on the landward side of) the proposed floodwall, features probably will be preserved in place. Where no archeologically significant remains are encountered in the monitored blocks, no further work is warranted.

The intent of the present monitoring plan is to provide a clear and explicitly stated set of procedural guidelines for the most efficient resolution of in-field problem resolution. This plan, then, is designed to avoid unnecessary delays during actual construction work and to minimize any confusion as to the proper

mitigation alternatives to be implemented. Where additional construction is scheduled in areas of significant archeological remains, mitigation steps will be recommended for those cultural resources.

Report of Finds in Unmonitored Blocks

Miscellaneous artifactual material, including refuse and structural debris, can be expected throughout the project area. The floodwall impact zone also will traverse the site of several late nineteenth to early twentieth century buildings which have been evaluated on the basis of archival research as nonsignificant. The foundations of these buildings outside the monitored blocks, and the general artifactual melange, need not be reported. However, significant undocumented archeological remains may be found outside the monitored blocks, and a list of the categories of cultural remains which should be reported immediately to the field monitor or authorized Corps of Engineers representative by construction personnel is presented in Appendix 2. That list can be distributed among the construction crew or other observers, and it includes only those classes of archeological remains that clearly fulfill the criteria for significance and that can be recognized by persons untrained in archeology. The "must-call" categories are prehistoric remains, human skeletal remains, historic vessels, historic military equipment or fortifications, and definable refuse concentrations such as brick-walled privies.

The above list of materials does not cover all the potentially significant sites which might be encountered in unmonitored blocks of the floodwall alignment, but it should encourage construction crew personnel to report such undocumented features. Prehistoric material is not expected in the floodwall area; should such in situ remains be found, they would be significant. Blocks containing fortifications in the floodwall alignment (Fort St. Charles and the Montreuil Defense Line) have been recommended for monitoring, and no fortifications or military assemblages are documented or expected in the non-monitored blocks. It is possible that remains of abandoned ships will be found in the floodwall alignment. Although no significant vessel remains also expected, construction crews should be alerted to the possibility of encountering historic ships or ship timbers. Privies and other well-defined refuse disposal areas, and derelict vessels, are among the types of features which frequently remain undocumented in historic sources. No satisfactory predictions of where these types of features might be found within the floodwall alignment are possible. No skeletal remains are expected in the floodwall impact zone, but the monitoring personnel should be immediately informed of any such finds.

Summary

The monitoring crew should be present at all times while actual construction excavation is in progress in those blocks recommended

or monitoring. This on-site surveillance should prevent unnecessary adverse impacts on significant archeological remains. The monitoring personnel will arrive at the job site before the commencement of the construction crew's scheduled work hours. Monitoring will continue until construction excavation is terminated at the end of the day. The monitoring personnel will not remain at the job site after the construction crew has departed; in some cases, security guards may be necessary.

Block by block descriptions of monitored blocks in the four floodwall alignments (Appendices 3-6) offer an explicit set of archeological expectations and significance criteria for use by monitoring personnel. Available data on the location, date, and importance of significant historic structures are preserved. The diagnostic or potentially diagnostic artifacts which may constitute a valid assemblage associated with the significant structures are identified tentatively. In the absence of structural remains within the inspection trench, associated features or artifact assemblages may provide the only identification of a building site. Other components present on the block likewise are identified below.

CHAPTER VII

SUMMARY AND CONCLUSIONS

Within the four proposed floodwall alignments, thirteen of a total of forty-two city blocks, and two additional wharf locations on the upriver alignment (Figure 23) may contain buried cultural resources eligible for the National Register of Historic Places. Of the thirteen blocks recommended for monitoring, twelve are located in the downriver floodwall alignments (Table 7). The two floodwall alignments scheduled for commencement of construction in 1985 are both located downriver from Canal Street (Figure 24). The completion of the four alignments dealt with in this study will provide the center of New Orleans with a nearly continuous riverfront floodwall (Figure 25).

Barracks to Montegut Floodwall

The Barracks to Montegut alignment contains three blocks that have been selected for monitoring (Figure 24). The blocks between Barracks Street and Esplanade Avenue, and between Esplanade and Elysian Fields Avenues, contained Fort St. Charles. This late colonial redoubt guarded the downriver limit of the French Quarter. The fortification was leveled shortly after the War of 1812. The old United States Mint occupies part of the site of Fort St. Charles, but the southeastern corner of the fort may have extended into the present line of North Peters Street, and into the levee area between that street and the river. Any remains associated with the fort are probably disturbed, but can provide locational data. The preliminary construction plans for this area indicate an access corridor or ramp leading from the foot of Esplanade Avenue to the proposed floodwall alignment; this corridor will be in the vicinity of the southeast corner of Fort St. Charles. Other components which may be encountered in the area include the Dubreuil (Marigny) Canal, roughly on the present line of Elysian Fields Avenue, and possibly the depot of the Southern Pacific Railroad transfer ferry. The ferry depot probably lies on the river side of the proposed floodwall alignment, but wooden planks or other remains of that structure may be encountered.

The block between Marigny and Mandeville Streets contained a narrow rectangular square that first was developed by Bernard Marigny in the 1830s. As designed by Marigny, this block was intended to contain residential and commercial structures. It later was the site of port-related facilities, such as a sail loft and shipwright.

Montegut to Independence Floodwall

The entire Montegut to Independence alignment contained significant historic structures, and six of its seven blocks are recommended for monitoring (Figure 24). The block between Montegut and Clouet Streets may yield information on an historic foundry. The adjacent block, between Clouet and Louisa Streets,

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ARCHEOLOGICAL MONITORING PLAN FOR FOUR FLOODWALL
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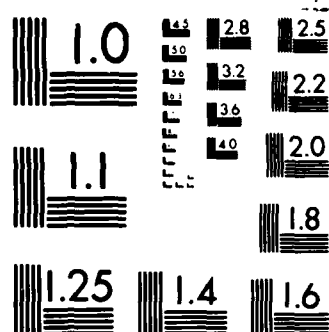
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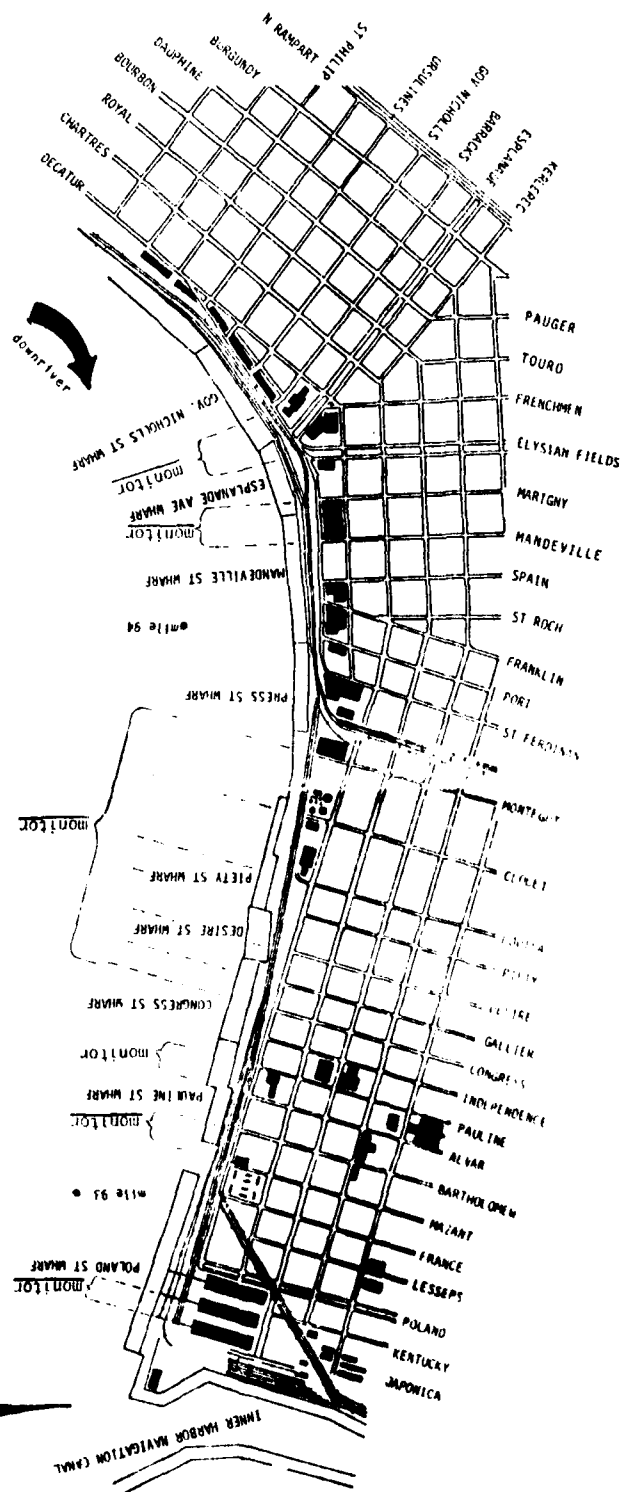
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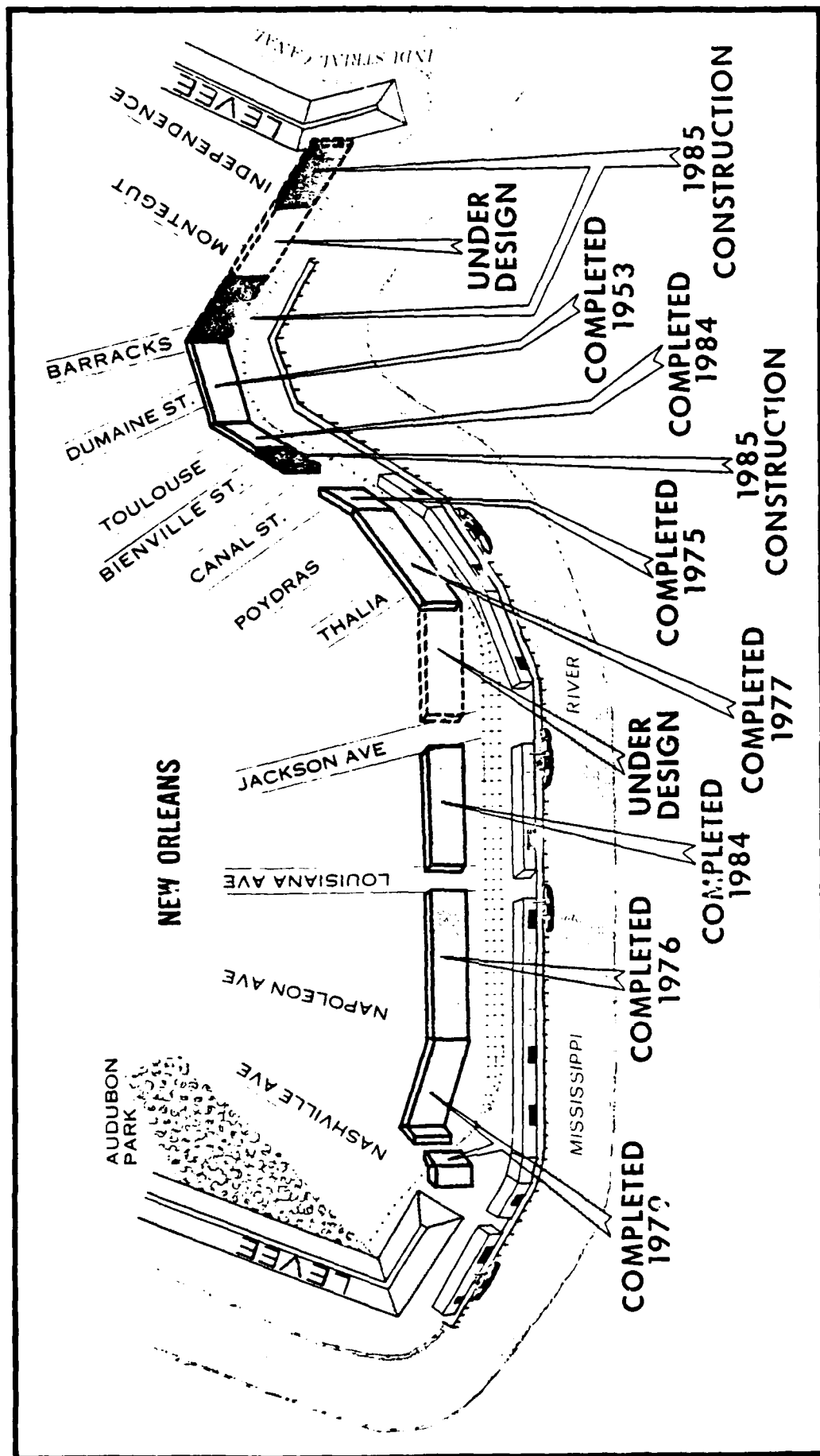


Figure 25. Map of the project area, showing the locations of completed and proposed floodwall alignments (courtesy of New Orleans District, U.S. Army Corps of Engineers).

TABLE 7. FLOODWALL AREAS RECOMMENDED FOR MONITORING.

<u>Floodwall Project</u>	<u>Block(s) to be Monitored</u>	<u>Potentially Significant Structures</u>
Jackson to Thalia Street July 1987	St. James - Market Foot of Robin Street Foot of Thalia Street	Municipal Ice Manufacturing Co. Nuisance wharf Unusual wharf (possible boat slip)
Barracks to Montegut June 1985	Barracks - Elysian Fields* Marigny - Mandeville	Ft. St. Charles Shipwright/Sail loft
Montegut to Independence May 1987	Montegut - Clouet Clouet - Louisa Louisa - Piety Piety - Desire Desire - Gallier Gallier - Congress	Soule's Foundry Guildives de Clouet House Miller and Pierce Sawmill/Touro Alms House Dunbar's Seafood Cannery Jackson's Defense Line
Independence to IHNC May 1985	Pauline - Alvar Bartholomew - Mazant Kentucky - Japonica	Home Brewing Company Barataria Canning Co. Lambou & Noel Lumber Co. (sawmill)

* Barracks - Esplanade and Esplanade - Elysian Fields

contained numerous businesses and industries, plus one residence, throughout the nineteenth century. While the planned floodwall construction will disturb this entire square, the downriver half of the block will be impacted directly. Monitoring should focus on the recovery of artifacts and structural remains of the distilleries, oil mill, and flour mill that formerly were located in this area.

The block between Louisa and Piety Streets was the site of the Louis B. de Clouet house. Since floodwall construction may impact the house or its formal gardens, monitoring in this area should be undertaken for appropriate evidence of domestic activities and structures. The foundation of the former site of the Touro Alms House will be impacted on the block between Piety and Desire Streets. Prior to the construction of the alms house, the block contained a sawmill. During the latter part of the nineteenth century, a coalyard utilized the square. Material remains of these three historical uses of this block may be observed during monitoring. While ancillary classes of data should be recorded in the field, archeological and architectural remains of the Touro Alms House are significant, and constitute the only property in this venue that may be eligible for the National Register of Historic Places.

The next block downriver, between Desire and Elmira (now Gallier) Streets, was the site of Dunbar's Seafood Cannery. During monitoring there, attention should focus on structural foundations and archeological remains of this industry. Andrew Jackson's 1815 defensive line will be encountered on the block between Gallier and Congress Streets. If observed, its remains should be documented carefully, and compared with other similar sites, as noted above.

Independence to Inner Harbor Navigation Canal Floodwall

The last downriver alignment segment, from Independence Street to the IHNC, contains three blocks recommended for monitoring (Figure 24). The blocks between Pauline and Jeannet (now Alvar) Streets, and between Bartholomew and Mazant Streets, have been selected for monitoring of brewery and cannery structures. Finally, the block between Alexander (now Kentucky) and Josephine (now Japonica) Streets contained a warehouse prior to 1875, and a sawmill after that date. Archeological monitoring in this block should focus on the recovery of remains from the sawmill industry, because of its previously demonstrated associative significance.

Jackson to Thalia Street Floodwall

On the other end of the project area, the upriver Jackson to Thalia alignment contains one block located between St. James and Market Streets that presents an opportunity to field verify the structural remains of an early ice manufacturing plant (Figure 23). In addition, the upriver segment contains the site of a small

nuisance wharf. This isolated location at the foot of Robin Street should be inspected during construction trench excavation. An unusual wharf, which may have been a boat slip, at the foot of Thalia Street also should be inspected in order to determine its use, extent and chronology (Figure 23).

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APPENDIX 1 RECORDATION PROCEDURES

1) The position of significant or possibly significant archeological remains encountered during the excavation of the inspection trench will be plotted in relation to the floodwall alignment, keyed to bankline stations, and to the city street grid. Engineering plans provided by the Corps of Engineers will serve as the primary map references for the floodwall alignment.

2) The horizontal and vertical position of isolated significant artifacts and of archeological features will be recorded. Measured plans and scaled profile drawings of structural remains and other features will be prepared in the field. These drawings will be color-coded to the Munsell soil color chart. The stratigraphic position of the remains will be indicated by profile drawings. Any observations on the features or stratigraphy, such as notes on soil texture, will be recorded in the field.

3) Significant archeological features will be photographed in situ. Stratigraphic profiles will also be photographed. A 35 mm single lens reflex camera will be the standard tool for photographic recordation.

4) Diagnostic artifacts will be collected from features. Samples of material for analysis or identification will be collected when required for the interpretation of remains. Soil samples will be collected only at prehistoric sites. Soil samples will be collected in standard one liter units. The total volume of soil samples from a single feature is not to exceed three liters. These samples can serve for flotation and for chemical analysis. Radiocarbon samples will be collected at prehistoric sites. Carbon 14 samples will not be collected at historic sites, with the possible exception of early ship remains. Faunal and botanical remains will be collected at prehistoric sites; such remains may be collected at historic sites, at the discretion of the archeological monitor. Wood samples may be collected for species identification, at the discretion of the field monitor. Metal fragments or other miscellaneous remains may be collected at historic sites for materials identification, at the discretion of the field monitor. Collection of analytical samples at historic sites might aid in the identification of activity areas at those sites. Such samples normally should not be required for interpretation of the historically documented structures in the floodwall alignment.

APPENDIX 2
CATEGORIES OF CULTURAL REMAINS TO BE
REPORTED TO MONITORING PERSONNEL
(THE "MUST CALL" LIST)

The following types of archeological remains should be reported immediately to the field monitor, or to the Corps of Engineers inspector in the field, if the material is encountered during the excavation of the inspection trench or of adjacent trenches within the floodwall right-of-way:

- 1) Prehistoric remains (arrowheads or other stone tools, prehistoric pottery, hearths, etc.)
- 2) Human skeletal remains, or coffins and other material which indicate the presence of a cemetery or burial site.
- 3) Historic ships, or the remains of shipwrecks and sunken or abandoned vessels.
- 4) Historic military equipment or fortifications.
- 5) Definable refuse concentrations, such as filled privy pits and wells.

In addition to the above classes of material, any other finds which appear to be important or unusual should be reported to the field monitor or to the Corps of Engineers inspector in the field. In general, those remains which are of the greatest age, and have been least disturbed by later activities, are the most significant. "Historic" here refers to material which dates to 1900 or earlier. Miscellaneous artifacts, including refuse and structural debris, may be found throughout the floodwall alignment but are generally non-significant. The floodwall alignment also crosses the sites of several nineteenth and early twentieth century buildings in blocks which will not be monitored. These buildings are documented historically and have been evaluated as non-significant. The foundations of these structures do not have to be reported unless they are associated with otherwise significant remains. If any material in the critical "must-call" categories, or other important artifacts and features, are encountered during excavation of the inspection trench, work at that location should be halted until the field monitor or Corps of Engineers inspector can evaluate the remains. The material should be disturbed as little as possible before the arrival of those personnel.

APPENDIX 3

MONITORING INFORMATION: JACKSON AVENUE TO THALIA STREET

St. James - Market

The Municipal Ice Manufacturing Company occupied the downriver half of this block, except for the frontage along South Peters Street. This structure is significant because of its association with the impact of technological processes on the growth of industry in New Orleans. The plant was erected in 1891 and remained in operation until 1905, when the site was purchased for an electric power station. Material and features diagnostic of the ice plant may include foundations for freezing and water tanks, refrigeration units, and pumps and other elements associated with ice freezing operations. Tools such as ice tongs utilized in handling the product may also be present. The remaining portion of the block was occupied by a stave piling ground in the 1890s. No other historic components have been identified in this block.

Foot of Robin Street

A nuisance wharf was located at the foot of Robin Street ca. 1870. This example of a specialized wharf type may provide information on nineteenth century refuse disposal patterns and comparative structural data on types of wharves. Wooden pilings and planks should be associated with this site, but the spatial patterning of these remains rather than the material itself is diagnostic of this wharf. Heavier refuse items may be concentrated near the end of the wharf structure. Other wharf structures were located in the area by the 1830s. The waterfront in this area was occupied by iron frame structures by the early 1900s. Late nineteenth century coalyards constituted the only other historic component at this locality.

Foot of Thalia Street

A wharf of unusual shape was located at the foot of Thalia Street in the 1850s. The structure may have filled a specialized function, perhaps as a boat slip, and therefore may provide comparative data on wharf types and uses. The construction and demolition dates of this wharf are unknown. The associated artifact assemblage may indicate the time range over which this structure was utilized, and the wharf's special function. If it served as a boat slip, boat-handling tools, engine parts, and remains of boats should constitute a diagnostic artifactual assemblage. The area was occupied by railroad-related structures, including wood frame freight depots, after ca. 1880. No other historic components are documented at this locality.

APPENDIX 4

MONITORING INFORMATION: BARRACKS STREET TO MONTEGUT STREET

Barracks - Elysian Fields

Fort St. Charles was located near the riverfront in the present blocks between Barracks and Esplanade Avenue, and between Esplanade Avenue and Elysian Fields Avenue. The structure was located largely behind (on the landward side of) the floodwall alignment, but the southeast corner of the fort may extend into the floodwall impact zone near the present foot of Esplanade Avenue. The fort was constructed by the Spanish colonial government ca. 1790, and remained a military facility until at least 1815. The fortifications were leveled shortly after the end of the War of 1812. No remains of the fort have been recorded archeologically; any material associated with this site are therefore significant.

The fort's earthen ramparts were completely removed, but compacted earth surfaces of the ditch and embankment or post holes from the fort's timber palisade may be encountered, providing valuable locational information on the structure's spatial extent and orientation. An artifactual assemblage dating to the period 1790 - 1815 may be found outside of but associated with the fortification. The fort was garrisoned, although it never saw military action, and a broad assemblage of material may be present at the site. Musket parts, gun flints, and other military-related items constitute the diagnostic artifacts which should be present in the assemblage.

Other historic components in these two blocks were largely related to railroad-related activities after ca. 1880, including a railroad transfer ferry near the foot of Esplanade Avenue. However, no buildings are documented in the portion of the floodwall alignment in the vicinity of Fort St. Charles. Any material associated with this later use of the area should be distinguished both by its later date and its stratigraphic position.

Marigny - Mandeville

A shipwright and a sail loft, adjoining commercial establishments within a block of rowhouses and stores, were located approximately 200 feet downriver from the intersection of North Peters and Marigny Streets. These establishments were in operation in 1876. The area contained several stores in the period 1840 - 1890. These structures are associated with shipping-related commerce on the New Orleans waterfront. Diagnostic artifacts associated with the sail loft would include canvas, rope, heavy needles, and other specialized tools for the fabrication or repair of rigging and sail cloth. Bolt cutters,

iron ferrules, caulking irons and mallets, nails, pegs and other diagnostic tools and materials associated with the repair of wooden vessels may be present at the site of the shipwright's shop. These assemblages would reflect the specialized commercial activities serving the maritime trade. The actual shop locations are architecturally indistinguishable from other units within the block of rowhouses. The identification of the diagnostic assemblages for these shops is critical for verification of the shop locations. The other historic component on the block is railroad-related material dating after ca. 1890. These remains should be easily distinguishable from the earlier material by age and stratigraphy.

APPENDIX 5

MONITORING INFORMATION: MONTEGUT STREET TO INDEPENDENCE STREET

Montegut - Clouet

Soule's Foundry was located in the downriver half of this block. The floodwall alignment should impact only the riverside wall of the structure. The foundry was established in the 1830s. The structure is significant due to its association with Louisiana's early industry, and as an example of an ante bellum foundry. Diagnostic artifacts present at the site may include slag, scrap iron, forges, molds, crucibles, bellows, and a variety of ironworking tools. The types of artifacts recovered may indicate the production methods utilized at the foundry and the types of articles produced there.

The site of the foundry was occupied by the Atlantic Cotton Press by 1877. Equipment employed in the cotton-pressing process may be encountered in this locale, although the actual press was located outside the floodwall impact zone. Structural remains may indicate whether the foundry building remained in use as part of the cotton press complex, or if new buildings were constructed above the foundry structure. No other historic components have been documented in this area of the block which may be impacted.

Clouet - Louisa

The locations of the early rum distilleries in this block are unknown. These distilleries were established between 1805 and 1820; their terminal dates are unknown. Remains of these structures are significant as early examples of industrial establishments in the New Orleans area. Diagnostic artifactual assemblages associated with these sites might include copper still fragments, metal boilers, coils and tubing, and other equipment associated with the distilling process, and glass bottles, ceramic jugs, wooden barrels and other containers for the raw materials or finished products of distillation.

This block contains numerous other nineteenth century components. Historic structures located on the riverside half of the block included a cotton seed oil mill, a brewery, and a hauling company; all of these were established after the Civil War. A commercial drayage (hauling) company occupied the upriver end of the block; this establishment should not be impacted by the floodwall. The Pelican Brewing Co. was located in the upper half of the block. The diagnostic artifact assemblage for the brewery should include bottle closures, glass bottles or wooden barrels which served as containers, fragments of the brewing vats, and related equipment. The Louisiana Oil Co. and Louisiana Oil Mill occupied the center of the block. The characteristic artifact assemblage includes the seed press and related machinery, oil containers, and perhaps preserved cotton seeds. The location of

the press itself and storage areas for oil containers may be marked by oily or greasy midden deposits. Cotton seeds may be preserved in such middens. The Lawler Flour Mill occupied the riverside corner of the downriver end of the block. The construction date of the flour mill is not documented; the structure was erected on the site of several small nineteenth century structures. The assemblage associated with the flour mill includes twentieth century milling machinery, and perhaps fragments of burlap bags or paper sacks. This assemblage should be readily distinguished from earlier material by its later date and stratigraphic position.

Louisa - Piety

The de Clouet house was located at an undetermined location within this block. This building was constructed before 1800; it later served as a gambling house and, in the 1830s, as a school. Remains of this colonial structure, or associated material, are significant due to the rarity of colonial plantation remains. Structural evidence of the great house and of various outbuildings may be encountered. Spatial patterning may reflect the layout of a formal garden. Diagnostic material for this site includes glass, ceramics, cutlery, and other domestic artifacts dating to the eighteenth century. Other historic components on this block, dating to the mid or late nineteenth century, are the Washington Girls School, the Washington Market House, and a number of small houses. The assemblages pertaining to these structures may overlap spatially and temporally with that of the de Clouet house. The presence of colonial artifacts, or of such gambling-related artifacts as poker chips and gaming tables, may indicate the site of the plantation residence.

Piety - Desire

Miller and Pierce's sawmill was located on this block. The sawmill was established by 1822 and operated until the 1850s. Diagnostic remains may include parts of the sawing machinery and foundations of the sawmill structures and water storage tanks.

The Touro Alms House was constructed in this block ca. 1860. The floodwall alignment passes through or near the site of the structure. The structure was used only during the years 1862-1865, when it served as a barracks for Federal troops. The building burned in 1865. The diagnostic military-related assemblage for this site includes bullets, military buttons and decorations, and a range of domestic artifacts. The block served as a coalyard later in the nineteenth century. No other historic components are present here. The artifact assemblage from the alms house should be clearly distinguished by the characteristic items of Civil War barracks and encampment sites and by the burned material marking its stratigraphic context.

Desire - Gallier

Dunbar's Seafood Cannery occupied most of this block. The company was established in 1877 and remained in operation into the twentieth century. The site is significant as an early example of the modern food-processing industry in New Orleans. Diagnostic artifactual remains associated with this commercial cannery may include steam kettles, boilers, pumps, cans, and oyster shell fragments. Structural remains include engine or pump houses, hydrants, and water storage tanks. Some small houses also were present on the block by the 1870s. The domestic assemblages present at these residential sites should be distinguished easily from the material at the cannery.

Gallier - Congress

The riverside end of General Andrew Jackson's third defense line, on the Montreuil plantation, is located in this block. The floodwall alignment passes through or near the bastion constructed by the bank of the Mississippi River. The defense line consisted of an earth rampart which was erected shortly before the Battle of New Orleans in 1815. The rampart was apparently leveled shortly after the battle was fought. This structure thus is directly associated with both an event and a person of outstanding importance in American history. Archeological data recovered at this site can provide valuable comparative data on the construction of defensive embankments, such as those present on the Chalmette battlefield. Diagnostic remains can include the compacted earth surface of the ditch and embankment complex, and military-related artifacts of the period 1812-1815 such as gunflints, musket balls, and uniform buttons and ornaments. Numerous small houses occupied this block by the 1870s. The domestic assemblages associated with these structures should be clearly distinguished by their age and stratigraphic position.

APPENDIX 6

MONITORING INFORMATION: INDEPENDENCE STREET TO INNER HARBOR NAVIGATION CANAL

Pauline - Alvar

The Home Brewing Co. owned the downriver end of this block between 1892 and 1894. This location was the site of an icemaking plant after 1894. Breweries were closely associated with the German immigrant community in New Orleans, and brewing became a significant local industry in the late nineteenth century. The diagnostic remains present at this site may include bottle closures, bottles, barrels, and the foundations of brewing vats and water storage tanks. The later ice plant on the site should be represented by water tanks, pumps, coolers, condensers, freezing apparatus, and ice tongs or other specialized tools. Other historic components on the block, located in the upriver end or middle of the block, were late nineteenth century houses, a cistern factory, and a sausage factory. The cistern factory is probably represented by the specialized equipment and materials for the manufacture of cypress wood water storage tanks. The diagnostic artifact assemblage might include saws and wood working tools and iron hoops. The diagnostic artifacts characteristic of the sausage factory would include specialized equipment for grinding meat and stuffing it into sausage liners. These specialized assemblages and the domestic artifact assemblages present at residential sites on the block should be separated spatially from the site of the brewery and the ice house.

Bartholomew - Mazant

The Barataria Canning Company occupied the lower half of this square. The company constructed a one-story frame structure at this location in 1899. The site is significant as an early example of the modern food processing industry in New Orleans. The diagnostic artifactual assemblage associated with this cannery includes steam kettles, boilers, pumps, cans, and oyster shell fragments. Diagnostic structural remains include engine houses, hydrants, and water storage tanks. The upriver half of the block was a residential area by the 1850s. The domestic artifact assemblages from these house sites should be distinguished easily from the cannery remains. No other historic components are present on the block.

Kentucky - Japonica

This block was occupied by the Lambou & Noel Lumber Company. The lumber company was established here ca. 1875, on the site of a tobacco warehouse demolished in 1874, and remained in operation into the twentieth century. The site is significant as an example of an industry closely linked to the growth of the city. The diagnostic artifact assemblage associated with this mill complex includes engines, mechanical saws, and water tank or shed foundations. A blacksmith shop and a carpenter's shop were located on the grounds of the complex, in proximity to the sawmill structure. The specialized tool assemblages associated with

those crafts may pinpoint the site of the shops. The only other historic component on the block is the tobacco warehouse, which stood from the 1830s to 1874. The structural debris of that brick building should underlie remains of the sawmill. The warehouse was apparently used only for commodity storage, and therefore block and tackle may be found in association with the structure.

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